

SERVICE MANUAL

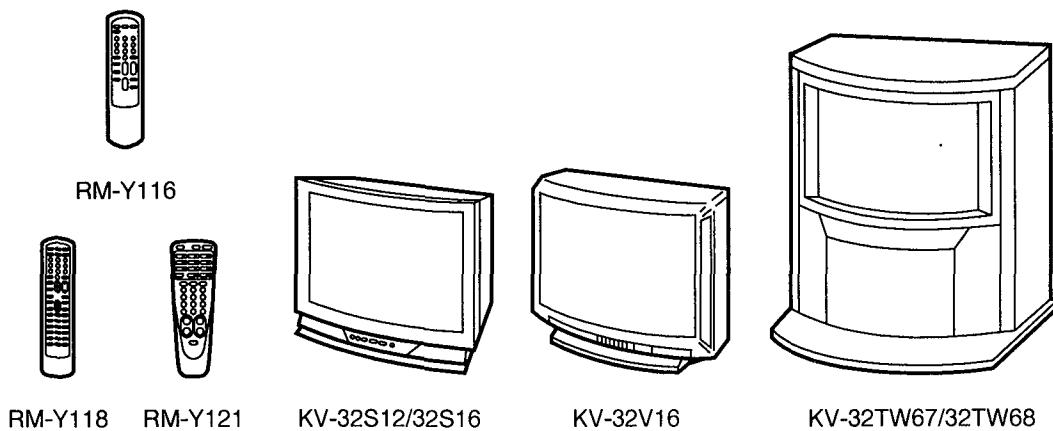
AA - 1 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-32S12	RM-Y116	US	SCC-F84V-A	KV-32TW67	RM-Y118	US	SCC-F84Y-A
KV-32S12	RM-Y116	Canadian	SCC-F85S-A	KV-32TW68	RM-Y118	US	SCC-H76A-A
KV-32S16	RM-Y121	US	SCC-F84W-A	KV-32V16	RM-Y121	US	SCC-F84X-A
KV-32S16	RM-Y121	Canadian	SCC-F85T-A	KV-32V16	RM-Y121	Canadian	SCC-F85R-A

Note :

1. Adjustment Manual for this model is separately published.

	Adjustment Manual
Part No.	9-965-038-01



MC-Service

**TRINITRON® COLOR TV
SONY®**

* Please file according to model size. ■

SPECIFICATIONS

KV-32S12

Television system	American TV standards	maximum volume setting (variable)
Channel coverage	VHF : 2 - 13 UHF : 14 - 69 CATV : 1 - 125	More than 408 mVrms (fix) Impedances : 5 kilo-ohms
Picture tube	Hi-Black™ Trinitron® tube 32-inch picture measured diagonally	Speaker output 5 W x 2
Antenna	75-ohm external antenna terminal for VHF/UHF	Power requirements 120 V AC, 60 Hz
Input	VIDEO and S VIDEO S VIDEO IN Y : 1 Vp-p, 75-ohms unbalanced, sync negative C : 0.286 Vp-p (Burst signal), 75-ohms Video : 1 Vp-p, 75-ohms unbalanced, sync negative Audio : 500 mVrms (100% modulation) Impedance : 47 kilo-ohms	Power consumption When in use : 195 W In standby : 6 W Dimensions (W/H/D) 781 x 714 x 613 mm (30 3/4 x 28 1/8 x 24 1/4 inches)
Speaker output	5 W x 2	Weight 69 kg (152 lbs 9 oz)
Power requirements	120 V AC, 60 Hz	Supplied accessories Remote Commander RM-Y121 (1) with 1 size AA (R6) battery
Power consumption	When in use : 190 W In standby : 6 W	Optional accessories U/V mixer EAC-66 Connecting cable VMC-810S/820S, VMC-720M, YC-15V/30V, RK-74A
Dimensions (W/H/D)	781 x 714 x 613 mm (30 3/4 x 28 1/8 x 24 1/4 inches)	
Weight	69 kg (152 lbs 9 oz)	
Supplied accessories	Remote Commander RM-Y116 (1) with 2 size AA (R6) batteries	
Optional accessories	U/V mixer EAC-66 Connecting cable VMC-810S/820S, VMC-720M, YC-15V/30V, RK-74A	

KV-32S16

Television system	American TV standards	maximum volume setting (variable)
Channel coverage	VHF : 2 - 13 UHF : 14 - 69 CATV : 1 - 125	More than 408 mVrms (fix) Impedances : 5 kilo-ohms
Picture tube	Hi-Black™ Trinitron® tube 32-inch picture measured diagonally	Speaker output 5 W x 2
Antenna	75-ohm external antenna terminal for VHF/UHF	Power requirements 120 V AC, 60 Hz
Input	VIDEO and S VIDEO S VIDEO IN Y : 1 Vp-p, 75-ohms unbalanced, sync negative C : 0.286 Vp-p (Burst signal), 75-ohms Video : 1 Vp-p, 75-ohms unbalanced, sync negative Audio : 500 mVrms (100% modulation) Impedance : 47 kilo-ohms	Power consumption When in use : 195 W In standby : 6 W Dimensions (W/H/D) 895 x 1117 x 700 mm (35 1/4 x 44 x 27 5/8 inches)
Output	AUDIO OUT : More than 408 mVrms at the	Weight 108.6 kg (239 lbs)
		Supplied accessories Remote Commander RM-Y118 (1) with 1 size AA (R6) battery
		Optional accessories U/V mixer EAC-66 Connecting cable VMC-810S/820S, VMC-720M, YC-15V/30V, RK-74A

KV-32V16

Television system	American TV standards	Speaker output	5 W x 2	
Channel coverage	VHF : 2 - 13 UHF : 14 - 69 CATV : 1 - 125	Power requirements	120 V AC, 60 Hz	
Picture tube	Hi-Black™ Trinitron® tube 32-inch (736mm) picture measured diagonally	Power consumption	When in use : 205 W In standby : 6.5 W	
Antenna	75-ohm external antenna terminal for VHF/UHF	Dimensions (W/H/D)	801 x 664 x 603 mm (31 5/8 x 26 1/4 x 23 3/4 inches)	
Input	VIDEO and S VIDEO Video : 1 Vp-p, 75-ohms unbalanced, sync negative Audio : 500 mVrms (100% modulation) Impedance : 47 kilo-ohms	Weight	70 kg (154 lbs 2 oz)	
Output	AUDIO OUT : More than 408 mVrms at the maximum volume setting (variable) More than 408 mVrms (fix) Impedances : 5 kilo-ohms	Supplied accessories	Remote Commander RM-Y121 (1) with 1 size AA (R6) battery RM-CM101 Optional accessories	U/V mixer EAC-66 Connecting cable VMC-810S/820S, VMC-720M, YC-15V/30V, RK-74A

Design and specifications are subject to change without notice.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK Δ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINT SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE DE ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE
LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE Á L'ALIMENTATION SECTEUR

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE Δ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQÜÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, through functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

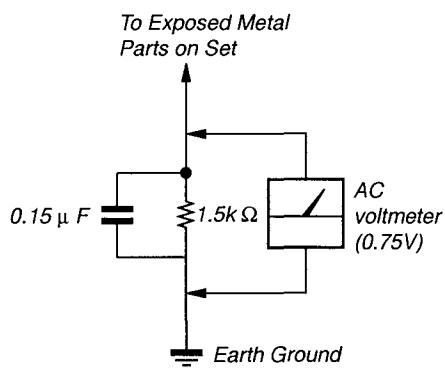


Fig. A. Using an AC voltmeter to check AC leakage.

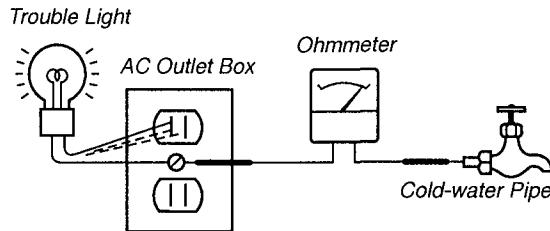


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>	<u>Section</u>	<u>Title</u>	<u>Page</u>
1. GENERAL					
Hook up	6		2-7. Picture Tube Removal		
Setting up the TV automatically (AUTO SET UP)	7		(1) KV-32S12/32S16/32V16	18	
Changing the menu language	9		(2) KV-32TW67/32TW68	19	
Watching the TV	9				
Watching two programs at a time-PIP	10				
Adjusting the picture (VIDEO).....	10				
Adjusting screen brightness automatically (LUMISPONDER)	11				
Adjusting the sound (AUDIO)	11				
Listening to surround sound (SURROUND).....	12				
Selecting stereo or bilingual programs (MTS)	12				
Setting the speaker switch (SPEAKER)	12				
Setting audio out (AUDIO OUT)	12				
Customizing the channel number buttons (CH CAPTION/GUIDE)	13				
Setting video labels (VIDEO LABEL).....	13				
Displaying Caption Vision (CAPTION VISION)	14				
Operating video equipment	14				
Operating a cable box	15				
2. DISASSEMBLY					
2-1-1. Rear Cover Removal (KV-32S12/32S16).....	16				
2-1-2. Rear Cover and Speaker Box Assy Removal (KV-32V16)	16				
2-1-3. Rear Plate Removal (KV-32TW67/32TW68)	16				
2-2-1. Chassis Assy Removal (KV-32S12/32S16/32V16)..	16				
2-2-2. Chassis Assy Removal (KV-32TW67/32TW68)	17				
2-3-1. Service Position (KV-32S12/32S16/32V16)	17				
2-3-2. Service Position (KV-32TW67/32TW68)	17				
2-4. P Board Removal	17				
2-5. U Board Removal	18				
2-6. Extension Cable	18				
3. SAFETY RELATED ADJUSTMENTS					
4. DIAGRAMS					
4-1. Block Diagrams (1)	26				
4-2. Block Diagrams (2)	31				
4-3. Circuit Boards Location	35				
4-4. Printed Wiring Board and Schematic Diagrams	35				
• D Board	39				
• UA Board	44				
• M Board	51				
• Z Board (KV-32V16 only)	56				
• L Board (KV-32V16 only)	56				
• P Board (KV-32S12/32TW67/32TW68/32V16)	58				
• A Board	65				
• E Board	67				
• H Board	69				
• C Board	70				
4-5. Semiconductors	73				
5. EXPLODED VIEWS					
5-1. Chassis (KV-32S12/32S16)	75				
5-2. Picture Tube (KV-32S12/32S16)	76				
5-3. Chassis (KV-32V16)	77				
5-4. Picture Tube (KV32V16)	78				
5-5. Chassis (KV-32TW67/32TW68)	79				
5-6. Control Panel (KV-32TW67/TW68)	80				
5-7. Picture Tube (KV-32TW67/TW68)	81				
6. ELECTRICAL PARTS LIST					
		82			

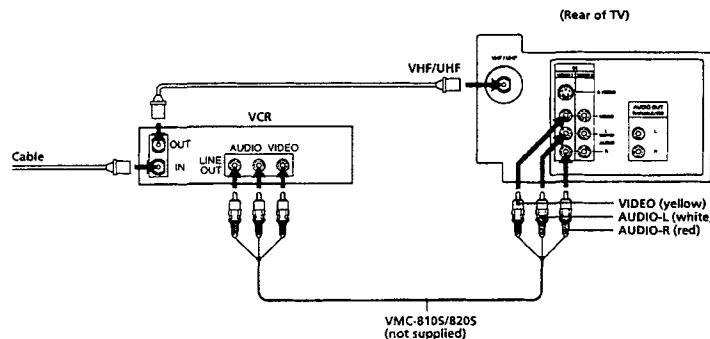
SECTION1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

Connecting an antenna/cable TV system with a VCR

To connect your VCR to the TV, first check the model number of your TV and select the corresponding connection. For details on connection, see the instruction manual of your VCR. Before making connection, disconnect the AC power cords of the equipment to be connected.

Without a cable box

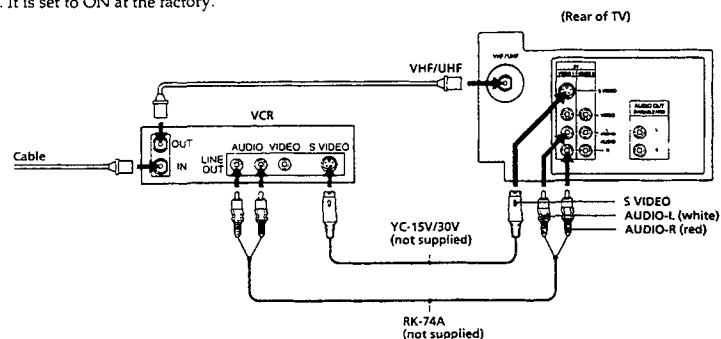


Note

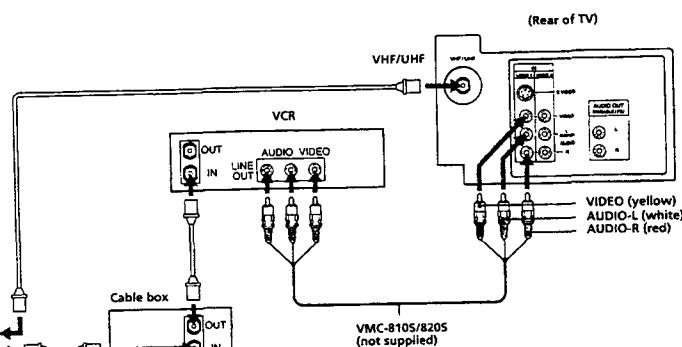
- To connect a monaural VCR, connect the audio output of the VCR to AUDIO-L (mono) of VIDEO 1 IN on the TV.

To an S video equipped VCR without a cable box

If your VCR has an S video output jack, hook up as follows and then set S VIDEO to ON on your TV (page 12). It is set to ON at the factory.



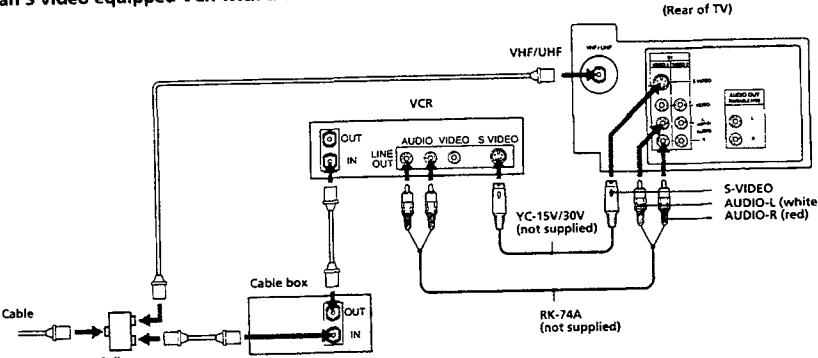
With a cable box



Note

- To connect a monaural VCR, connect the audio output of the VCR to AUDIO-L (mono) of VIDEO 1 IN on the TV.

To an S video equipped VCR with a cable box

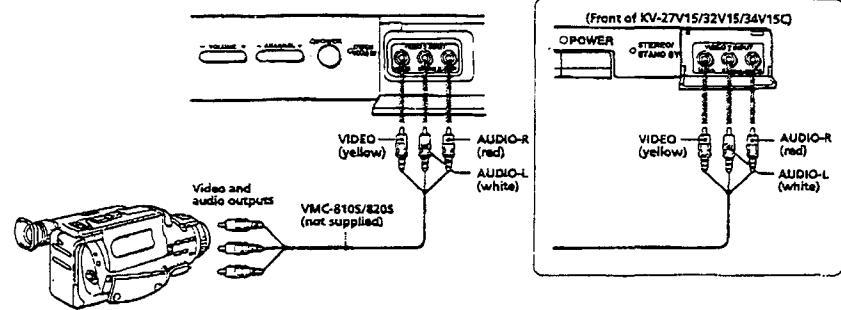


Note

- Video signals are composed of Y (luminance) and C (chroma) signals. The S connection sends the two signals separately preventing degradation, and gives better picture quality compared to conventional connection.

Connecting a camcorder

This connection is convenient for viewing a camcorder.

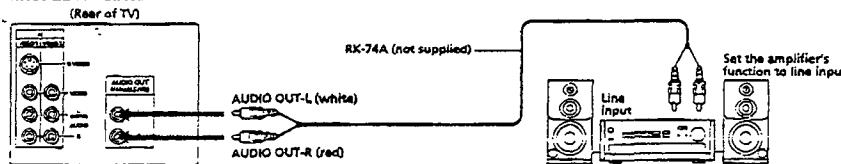


Note

- To connect a monaural camcorder, connect the audio output of the VCR to AUDIO-L (mono) of VIDEO 2 INPUT on the TV.

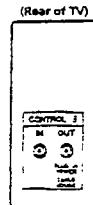
Connecting an audio system

When connecting audio equipment, see page 20 for more information.



Connecting other Sony equipment with CONTROL S jack

Connect the supplied cable box controller (Cable Mouse) to the CONTROL S OUT jack. Refer to the Cable Mouse's manual for details on the connection.



Make the following connections to control the TV and connected equipment with one remote commander.

- To control other Sony equipment with the TV's remote commander, connect the input of the equipment to CONTROL S OUT jack on the TV.
- To control the TV with the remote commander of other Sony equipment, connect the output of the equipment to CONTROL S IN jack on the TV.

Step 3: Setting up the TV automatically (AUTO SET UP)

- Press CH +.



"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed. If the TV receives cable TV channels, CATV is set to ON automatically.

Notes

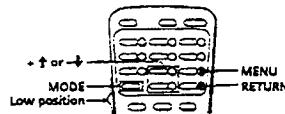
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.
- In case of using the AUX connector, press the TV button on the remote commander first and make sure that "AUX" is displayed beside the channel number on the screen. Then follow steps 2 and 3 above to perform AUTO SET UP. (KV-32V15 only)

DEMO: To browse the main functions, Press VOL + in step 3. The functions and menus are displayed one by one.

FACTORY RESET: To restore the factory settings when you are confused about the TV settings, Press CH - in step 3. The settings of picture and sound are restored to the factory setting.

Erasing or adding channels

After AUTO SET UP you can erase unnecessary channels or add the channels you want. Preset channels during the day rather than late at night, when some channels may not be broadcasting.

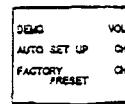


- Press POWER to turn the TV on.



- Press SET UP on the front of the TV.

The menu appears.



- Press MENU.

The main menu appears.



(continued)

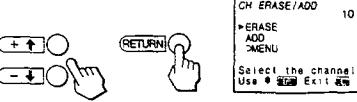
- 2** Press + or - to move the cursor (>) to SET UP and press RETURN.
The SET UP menu appears.



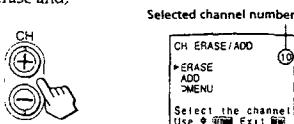
- 3** Press + or - to move the cursor (>) to CH SET UP and press RETURN.
The CH SET UP menu appears.



- 4** Press + or - to move the cursor (>) to CH ERASE/ADD and press RETURN.
The CH ERASE/ADD menu appears.



- 5** Erase and/or add the channel you want:
To erase an unwanted channel
- (1) Make sure the cursor (>) is beside ERASE.
 - (2) Press CH +/- to select the channel you want to erase and,

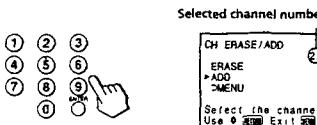


- (3) press RETURN.
The indication “-” appears beside the channel number, showing that the channel is erased from the preset memory.



To add a channel that you want

- (1) Press + or - to move the cursor (>) to ADD.
- (2) Press the 0 - 9 buttons to select the channel you want to add and press ENTER and,



- (3) press RETURN.
The indication “+” appears beside the channel number, showing that the channel is added to the preset memory.



- 6** To erase and/or add other channels, repeat step 5.

- 7** When you finish, press MENU.



Notes

- If you erase or add a VHF or UHF channel, the cable TV channel with the same number is also erased or added, and vice versa.
- Erasing and adding channels are also available for the AUX input. (KV-32V15 only)

Setting cable TV on or off

For cable box control (Cable Mouse) users

Refer to the supplied Cable Mouse manual on how to set cable TV.

If you have connected the TV to a cable TV system, set CABLE to ON, the factory setting. If not, set CABLE to OFF.

You do not have to do this procedure if you execute AUTO SET UP (page 10). Do this procedure only when you want to set it manually.

1 Press MENU.

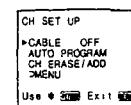
- 2** Press + or - to move the cursor (>) to SET UP and press RETURN.

- 3** Press + or - to move the cursor (>) to CH SET UP and press RETURN.



4 Set CABLE to ON or OFF:

- (1) Make sure the cursor (>) is beside CABLE and press RETURN.
If the cursor is not beside CABLE, press + or - to move the cursor and press RETURN.
- (2) Press + or - to select ON or OFF and, press RETURN.



- 5** Press MENU to return to the original screen.

Note

- If CH SET UP appears in black, the TV is set to a video input and you cannot select CABLE. Press TV/VIDEO or TV so that a channel number appears.

Presetting channels

For cable box control (Cable Mouse) users

Refer to the supplied Cable Mouse manual on how to preset channels.

You can preset TV channels easily by using the AUTO PROGRAM feature.

You do not have to do this procedure if you execute AUTO SET UP (page 10). Do this procedure only when you want to set it manually.

1 Press MENU.

- 2** Press + or - to move the cursor (>) to SET UP and press RETURN.

- 3** Press + or - to move the cursor (>) to CH SET UP and press RETURN.



- 4** Press + or - to move the cursor (>) to AUTO PROGRAM and press RETURN.



“AUTO PROGRAM” appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, “AUTO PROGRAM” disappears and the lowest numbered channel is displayed.

- 5** Press MENU to return to the original screen.

Notes

- If the CH SET UP menu appears in black, the TV is set to a video input and you cannot select AUTO PROGRAM. Press TV/VIDEO or TV so that a channel number appears.
- Presetting channels is also available for the AUX input. (KV-32V15 only)

Setting S video on or off

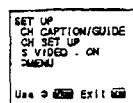
You can change the S VIDEO menu to ON or OFF.

1 Press TV/VIDEO to select VIDEO 1.

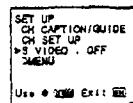
2 Press MENU.

3 Press + or - to move the cursor (>) to SET UP and press RETURN.

4 Press + or - to move the cursor (>) to S VIDEO and press RETURN.



5 Press + or - to select ON or OFF and press RETURN.



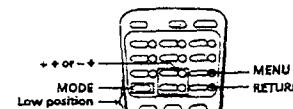
6 Press MENU to return to the original screen.

Notes

- If S VIDEO appears in black, set a video input to VIDEO 1.
- If you set S VIDEO to ON, the TV automatically receives S video signals whenever a VCR with S video is connected.

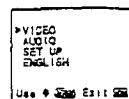
Changing the menu language

If you prefer Spanish to English, you can change the menu language.



1 Press MENU.

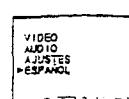
The main menu appears.



2 Press + or - to move the cursor (>) to ENGLISH and press RETURN.



3 Press + or - to select ESPAÑOL and press RETURN.

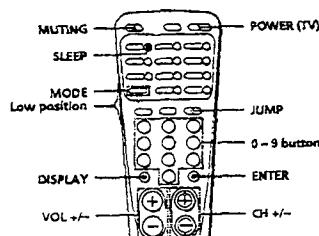
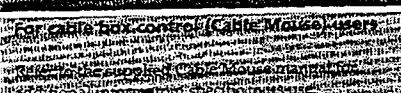


4 Press MENU to return to the original screen.

Note

- Certain parts of the ESPAÑOL menus remain in English.

Watching the TV



1 Press POWER (TV) to turn the TV on.



If "VIDEO" appears on the screen, press the TV/VIDEO or TV button so that a channel number appears.

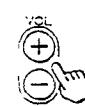
2 Select the channel you want:

To select a channel directly
Press the 0-9 buttons and then press ENTER.
To scan through channels
Press CH +/- until the channel you want appears.



The channel can also be selected without pressing ENTER.

3 Press VOL +/- to adjust the volume.



Note

- Set the CABLE BOX/TV selector to TV.

14 | Operations

Switching quickly between two channels

Press JUMP.

The channel you watched previously appears.



Pressing JUMP again switches back the channel.

Muting the sound

Press MUTING.

"MUTING" appears on the screen.



To restore the sound, press MUTING again, or press VOL +.

Displaying on-screen information

Use this feature to check the channel number, channel caption (if set), and MTS mode (if SAP is selected).

Press DISPLAY.



To cancel the display, press DISPLAY again.

Setting the Sleep Timer

The TV stays on for the length of time you specify and then shuts off automatically.

Press SLEEP repeatedly until the time (minutes) you want appears.

Each time you press SLEEP, the time changes as follows: 30 → 60 → 90 → OFF.



To cancel the Sleep Timer, press SLEEP repeatedly until "SLEEP OFF" appears, or turn the TV off.

Changing the VHF/UHF input to the AUX input

■ KV-32V15/34V15C only

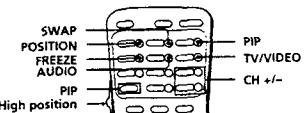
Press TV.



Pressing TV again switches back to the previous input.

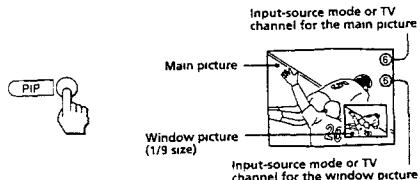
Watching two programs at a time —PIP

The Picture-in-Picture (PIP) feature allows you to watch both the main picture and a window picture simultaneously. You can watch two TV channels at a time with this feature. See "Connecting an antenna/cable TV system with a VCR" (page 6) for connections.

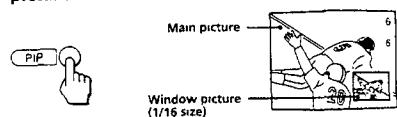


Displaying a window picture

Press PIP



Press PIP again to display a smaller window picture.



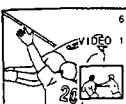
To remove the window picture, press PIP again.

Notes

- If the main picture is not receiving an image, the window picture may be in black and white.
- The window picture may be affected by the condition of the main picture.
- The window picture sound is also output from the VARIABLE/FIX AUDIO OUT jacks when you listen to

Changing the window picture input mode

Press TV/VIDEO in the PIP control area to select the input mode. Each time you press TV/VIDEO, "TV", "VIDEO 1", "VIDEO 2" and "VIDEO 3 (except for KV-27S15/29RS15)" appear in sequence.



A window picture will appear in the same input mode as the last time you used PIP.

Listening to the sound of the window picture

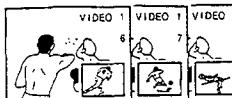
Press AUDIO.

The λ display appears for a few seconds, indicating that the window picture sound is being received.



Changing TV channels in the window picture

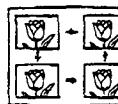
Press CH +/- in the PIP control area.



Changing the position of the window picture

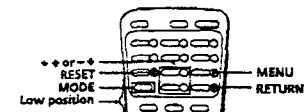
Press POSITION.

Each time you press POSITION, the window picture will move counterclockwise on the screen.

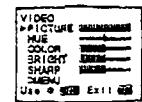


Adjusting the picture (VIDEO)

When watching TV programs, you can adjust the quality of the picture to suit your taste. You can adjust the picture of video input(s) as well. These settings are stored separately from those for the TV picture.



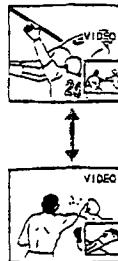
- 1 Press MENU.
- 2 Make sure the cursor (\gg) is beside VIDEO and press RETURN.



Swapping the main and window pictures

Press SWAP.

Each time you press SWAP, the images from the main and window pictures switch places along with the sound.



(2) press RETURN.



Note

- The channels being received through the AUX jack cannot be displayed as a window picture (KV-32V15/34V15C only).

4 Adjust the selected item:

(1) Press + or - to adjust the item and,



(2) press RETURN.

The new setting appears in the VIDEO menu.



For details on each item, see "Description of adjustable items" below.

5 To adjust other items, repeat steps 3 and 4.

Description of adjustable items

Item	Press + to	Press - to
PICTURE	Increase picture contrast and give vivid color	Decrease picture contrast and give soft color
HUE	Make skin tones become greenish	Make skin tones become purplish
COLOR	Increase color intensity	Decrease color intensity
BRIGHT	Brighten the picture	Darken the picture
SHARP	Sharpen the picture	Soften the picture

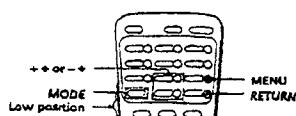
To restore the factory settings

Press RESET while the VIDEO menu is displayed.

All the settings except for PICTURE are restored to the factory settings.

Adjusting screen brightness automatically (LUMISPONDER)

The LUMISPONDER feature adjusts the brightness of the screen automatically according to the ambient brightness. The LUMISPONDER function automatically adjusts the level set by the user in the VIDEO menu to the standard.



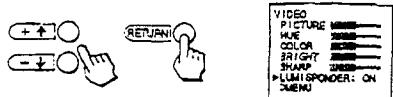
1 Press MENU.

2 Press + or - to select VIDEO and press RETURN.

3 Press + or - to select LUMISPONDER and press RETURN.



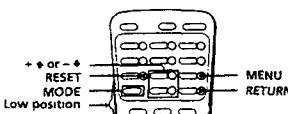
4 Press + or - to select ON or OFF and press RETURN.



Adjusting the sound (AUDIO)

You can adjust the quality of the TV sound to suit your taste.

You can adjust the sound of video input(s) as well. These settings are stored separately from those for the TV sound.



1 Press MENU.

2 Press + or - to select AUDIO and press RETURN.



3 Select the item you want to adjust.

For example:

(1) To adjust bass, press + or - to select BASS and,

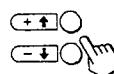


(2) press RETURN.



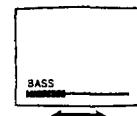
4 Adjust the selected item:

(1) Press + or - to adjust the item and,



(2) press RETURN.

The new setting appears in the AUDIO menu.



For details on each item, see "Description of adjustable items" below.

5 To adjust other items, repeat steps 3 and 4 above.

Description of adjustable items

Item	Press + to	Press - to
TREBLE	Increase the treble response	Decrease the treble response
BASS	Increase the bass response	Decrease the bass response
BALANCE	Emphasize the right speaker's volume	Emphasize the left speaker's volume

To restore the factory settings

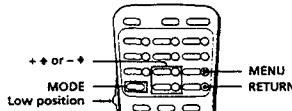
Press RESET while the AUDIO menu is displayed.

Note

- When SPEAKER (page 20) is OFF and AUDIO OUT (page 20) is FIXED condition, the sound is set to mid-level and it cannot be adjusted.

Listening to surround sound (SURROUND)

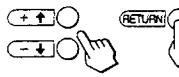
SURROUND feature simulates sound reproduction with the atmosphere of a movie theater or a concert hall. Surround sound is only effective for stereo programs.



- 1 Press MENU.
- 2 Press + or - to select AUDIO and press RETURN.
- 3 Press + or - to select SURROUND and press RETURN.

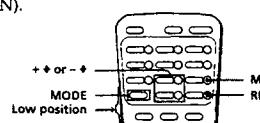


- 4 Press + or - to select ON and press RETURN.

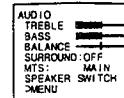


Selecting stereo or bilingual programs (MTS)

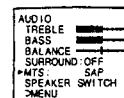
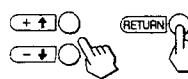
The Multichannel TV Sound (MTS) feature allows you to enjoy stereo sound or Second Audio Programs (SAP) at your choice. The initial setting is stereo sound (MAIN).



- 1 Press MENU.
- 2 Press + or - to select AUDIO and press RETURN.
- 3 Press + or - to select MTS and press RETURN.



- 4 Press + or - to select MAIN, SAP, or MONO and press RETURN.



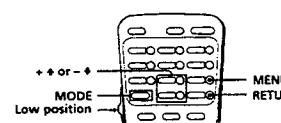
Choose	To
MAIN	Listen to stereo sound. The STEREO indicator on the TV lights up while a stereo broadcast is received.
SAP	Listen to bilingual programs. The sound of non-SAP programs will be muted when SAP is selected.
MONO	Reduce noise during stereo broadcasts.

Note

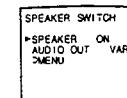
- Stereo and SAP sounds are subject to program sources.

Setting the speaker switch (SPEAKER)

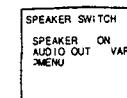
You may switch off the TV speakers when, for example, you want to listen to the sound through a stereo system.



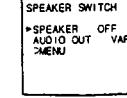
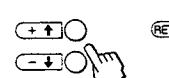
- 1 Press MENU.
- 2 Press + or - to select AUDIO and press RETURN.
- 3 Press + or - to select SPEAKER SWITCH and press RETURN.



- 4 Make sure the cursor (►) is beside SPEAKER and press RETURN.

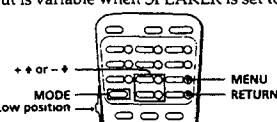


- 5 Press + or - to select ON or OFF and press RETURN.

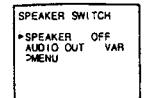
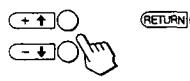


Setting audio out (AUDIO OUT)

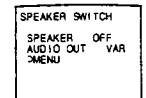
You can select audio out to variable or fixed when SPEAKER is set to OFF. Audio out is variable when SPEAKER is set to ON.



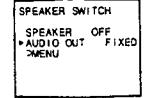
- 1 Press MENU.
- 2 Press + or - to select AUDIO and press RETURN.
- 3 Press + or - to select SPEAKER SWITCH and press RETURN.



- 4 Press + or - to select AUDIO OUT and press RETURN.



- 5 Press + or - to select VAR or FIXED and press RETURN.



VAR: Sound output varied according to the TV settings. You can adjust the volume, bass, treble and balance.

FIXED: Sound output is always fixed to a certain level. The volume, bass, treble and balance are also fixed to the factory settings.

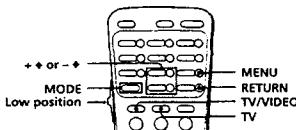
Customizing the channel number buttons (CH CAPTION/GUIDE)

For cable box control (Cable Mouse) users

Make the setting of Cable Mouse before customizing the channel number buttons.

You can choose up to 12 channels, caption each channel, and assign a specific channel number button to each channel. This feature allows you to select your favorite channels easily by name. For example, you can name channel 20 "ESPN," and assign the channel number 4 button to it.

Setting captions to favorite channels

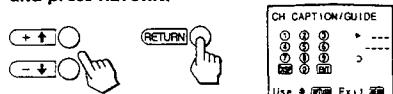


1 Press TV/VIDEO or TV to select TV mode.

2 Press MENU.

3 Press + or - to select SET UP and press RETURN.

4 Press + or - to select CH CAPTION/GUIDE and press RETURN.



5 Press RETURN again.



6 Press + or - to select a channel guide number button and press RETURN.

Numbers 0-9 and DISPLAY and ENTER are available for use as a customized channel number. Each time you press + or -, the channel positions change to red in turns. The channel number button you select will be the one you press to call up your favorite channel.



7 Press + or - to select the channel that you want to caption and press RETURN.



8 Enter the letters (up to four) to caption the channel:

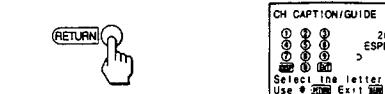
- (1) Press + or - to select the first letter. Each time you press + or -, the letter changes as shown below and, 0---1---...---9---A---B---...---Z---&---/---(blank space)



(2) Press RETURN.



(3) Repeat steps (1) and (2) to select the remaining letters and press RETURN.



(continued)

9 Repeat step 5 to 7 to caption other channels.

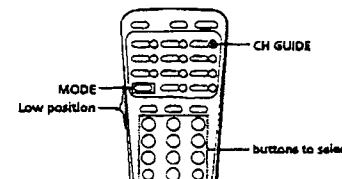
To erase a caption

Press RESET after step 5.

Notes

- The position number you already selected appears in yellow.
- If the CH CAPTION/GUIDE menu appears in black, the TV is set to a video input and you cannot select CH CAPTION/GUIDE.
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.
- The channel caption/guide feature is not available for the AUX input (KV-32V15/34V15C only)

Selecting a captioned channel



1 Press CH GUIDE

The CHANNEL GUIDE menu appears showing channel captions and the corresponding channel number buttons.



2 Press a channel number button, the DISP or ENT button to select the channel you want.

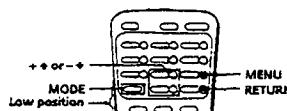
To cancel the CHANNEL GUIDE menu
Press CH GUIDE again.

Setting video labels (VIDEO LABEL)

(VIDEO LABEL)



This feature allows you to label each input mode so that you can easily identify the connected equipment. For example, you can label VIDEO 1 IN as VHS.



1 Press MENU.

2 Press + or - to select SET UP and press RETURN.

3 Press + or - to select VIDEO LABEL and press RETURN.



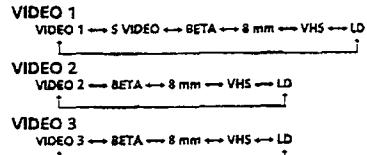
4 Press + or - to select the input mode you want to label and press RETURN.



- 5 Press + or - to select the label and press RETURN.



Each time you press + or -, the label changes as shown below.



- 6 Repeat steps 4 and 5 to label other input modes.

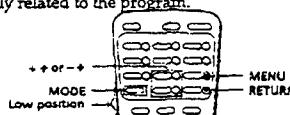
Note

- If more than 90 seconds elapse after you press a button, the menu disappears automatically.

Displaying Caption Vision (Caption Vision)

Some source programs are provided with Caption Vision (Closed Caption). To display Caption Vision, select either CC1, CC2, TEXT1, or TEXT2 from the menu.

CC1 or CC2 shows you a caption, that is a printed version of the dialog or sound effects of a program. (The mode should be set to CC1 for most programs.) TEXT1 or TEXT2 shows you text, that is information presented using half to full of the screen. It is not usually related to the program.



- 1 Press MENU.

- 2 Press + or - to select CAPTION VISION and press RETURN.



- 3 Press + or - to select the caption type and press RETURN.



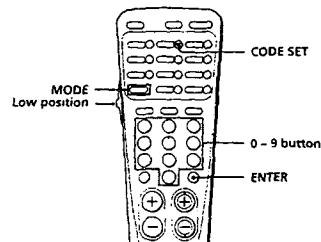
Note

- Captions may appear with a white box or another error instead of a certain word. Poor reception of TV programs can also cause errors in Caption Vision.

Operating video equipment

You can operate Sony or non-Sony video equipment that has an infrared remote sensor with the supplied remote commander. For this operation, set the manufacturer's code number.

Setting the manufacturer's code



While pressing CODE SET, press 0 ~ 9 to enter the manufacturer's code number (see the chart in the right column). For example, to operate a Sony 8 mm VCR, press 0, 2 and ENTER.



VCR Manufacturer Code numbers

Manufacturer	Code number
SONY	01, 02, 03
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08, 36
JVC	16, 35
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

MDP manufacturer code numbers

Manufacturer	Code number
SONY	04
KENWOOD	58
MAGNAVOX	52
MARANZ	54
MITSUBISHI	51
PANASONIC	55
PHILIPS	52
PIONEER	51
RCA	51
SANYO	57
SHARP	56
YAMAHA	53

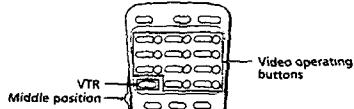
Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
 - In some rare cases, you may not be able to operate your non-Sony video equipment with this remote commander. This is because your equipment may use a code that is not provided with this remote commander. In this case, please use the equipment's own remote control unit.
 - The code numbers for Sony equipment are assigned at the factory as follows:
- | | |
|--------------------|--|
| Beta, ED Beta VCRs | 01 |
| 8 mm VCR | 02 |
| VHS VCR | 03 (preset code for this remote commander) |

Caution

When you remove a battery from the remote commander, the code may revert to 03. Reset the code each time you replace the battery, if necessary.

Operating video equipment



Use the video operating buttons on the remote commander to operate the video equipment.

Operating a VCR	Buttons on the remote commander
To turn on or off	Press POWER
To change channels	Press CH +/-
To record	Press • and REC simultaneously
To play	Press ▶
To stop	Press ■
To fast forward	Press ▶▶
To rewind the tape	Press ◀◀
To pause	Press II
To search the picture forward and backward	Press ▶▶ or ◀◀ during playback

Operating the laser-disc player	Buttons on the remote commander
To play	Press ▶
To stop	Press ■
To pause	Press II
To search the picture forward and backward	Keep pressing ▶▶ or ◀◀ during playback To resume normal playback, press again.
To search the chapter	Press CH +/-

Note

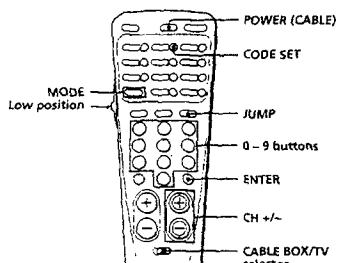
- If the video equipment does not have a certain function, the corresponding button on this remote commander will not operate.

Operating a cable box

For cable box control (Cable Mouse) users:

Set the CABLE BOX/TV selector to TV and disregard the instruction below.

Follow these instructions to set the manufacturer's code which will enable you to operate a connected cable box with the pre-programmed remote commander. For example, you can set the remote commander to operate a connected Zenith cable box.



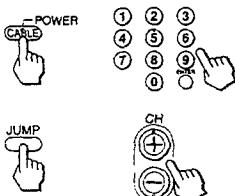
1 Set the CABLE BOX/TV selector to CABLE BOX.



2 While pressing CODE SET, press 6 and 8 (Zenith's code number —see chart on the next page) and ENTER.



3 Use POWER(CABLE) and the TV control buttons (0 - 9, ENTER, JUMP and CH +/-) to operate the cable box.



To operate the TV

Set the CABLE BOX/TV selector to TV. Then use the TV control buttons to control the TV.

For more details on operating the cable box
Refer to the operating instructions that come with the cable box.

Manufacturers and code numbers (cable box)

Manufacturer	Code number
JERROLD	60, 61, 62, 63, 64, 65, 73
PIONEER	69, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

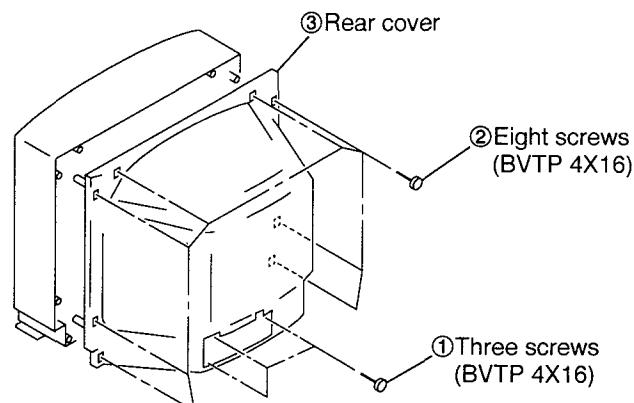
Notes

- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some cases, your equipment may use a code that is not provided with this remote commander and you may not be able to operate your cable box with the supplied remote commander. In this case, use the equipment's own remote control unit.
- When you remove a battery from the remote commander, the code may be erased. Reset the code each time you replace the battery, if necessary.

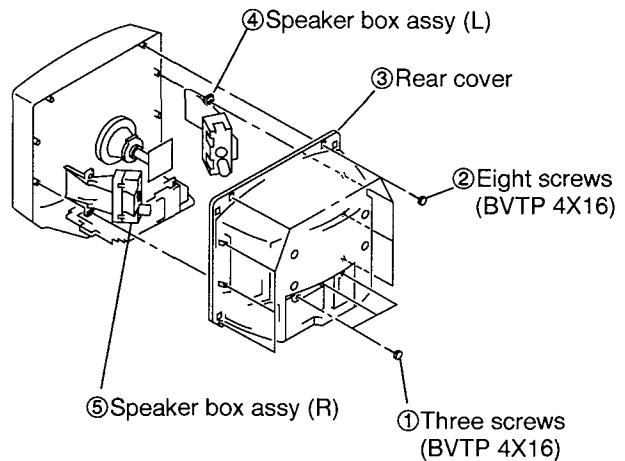
(continued)

SECTION 2
DISASSEMBLY

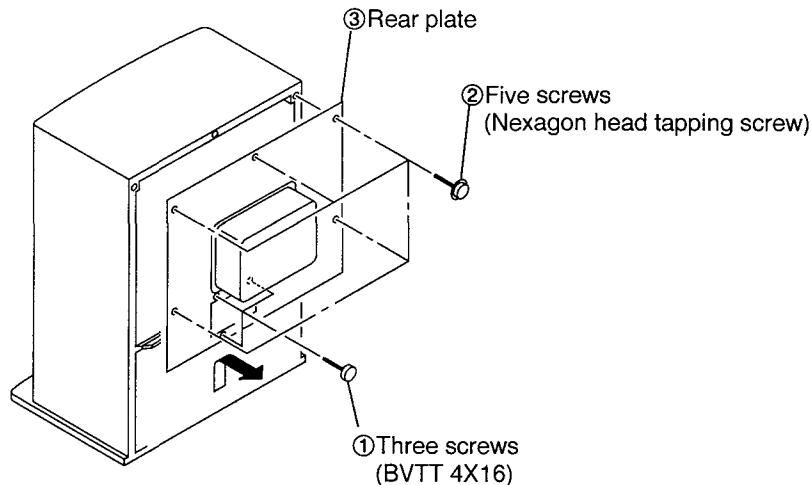
2-1-1. REAR COVER REMOVAL
(KV-32S12/32S16)



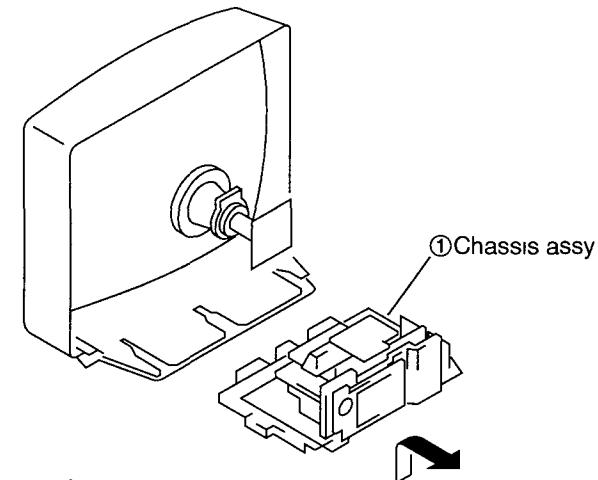
2-1-2. REAR COVER AND SPEAKER BOX ASSY REMOVAL
(KV-32V16)



2-1-3. REAR PLATE REMOVAL
(KV-32TW67/32TW68)

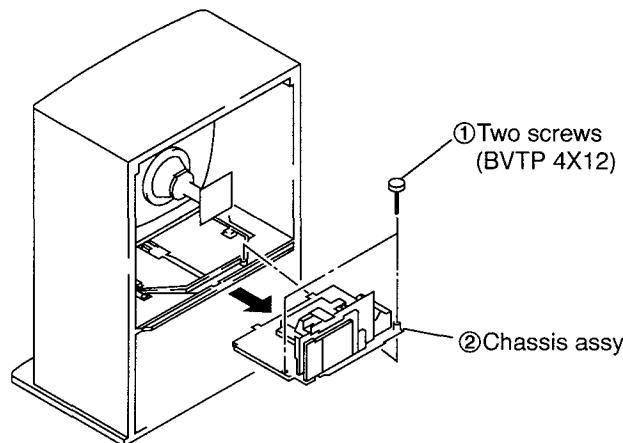


2-2-1. CHASSIS ASSY REMOVAL
(KV-32S12/32S16/32V16)

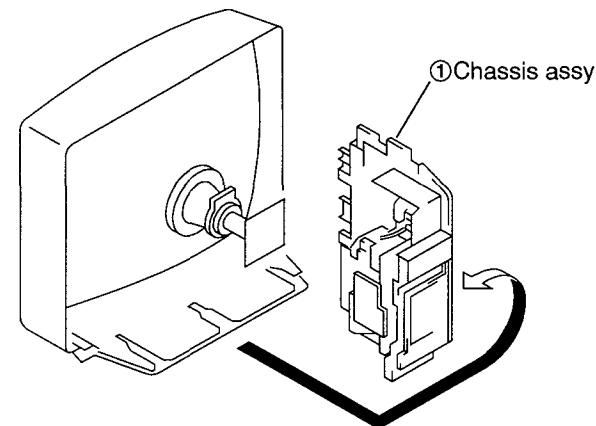


MC-Service

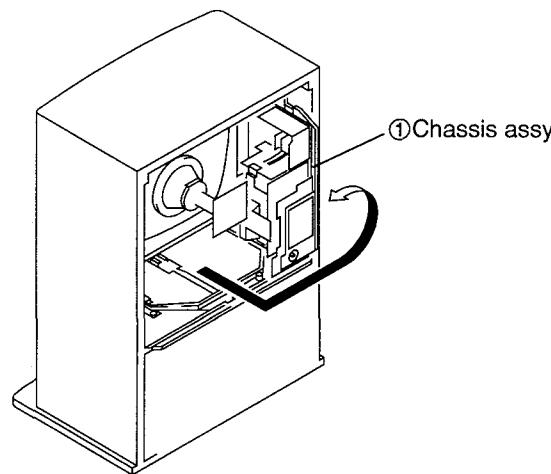
**2-2-2. CHASSIS ASSY REMOVAL
(KV-32TW67/32TW68)**



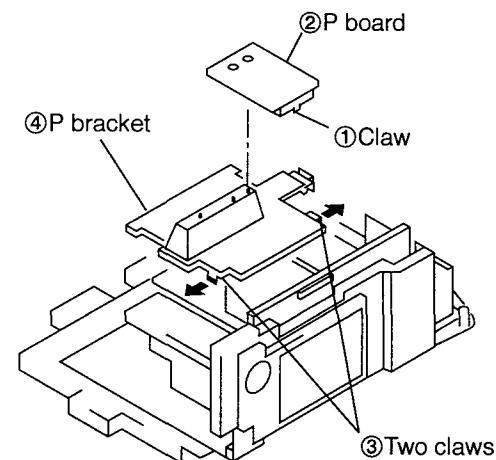
**2-3-1. SERVICE POSITION
(KV-32S12/32S16/32V16)**



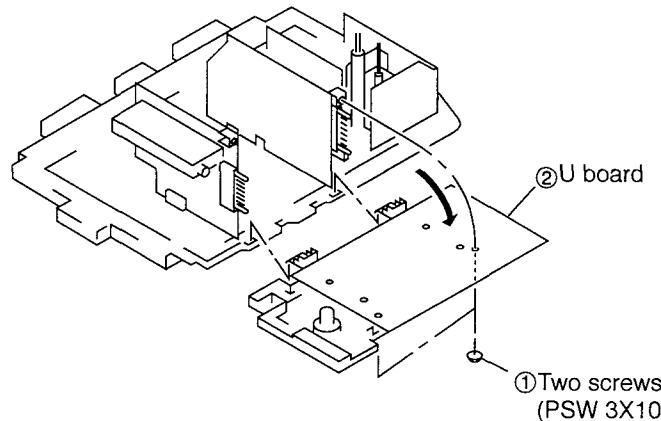
**2-3-2. SERVICE POSITION
(KV-32TW67/32TW68)**



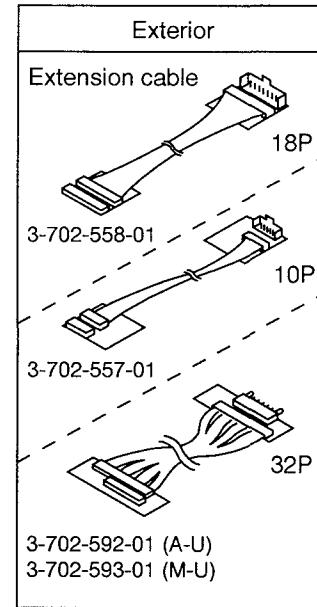
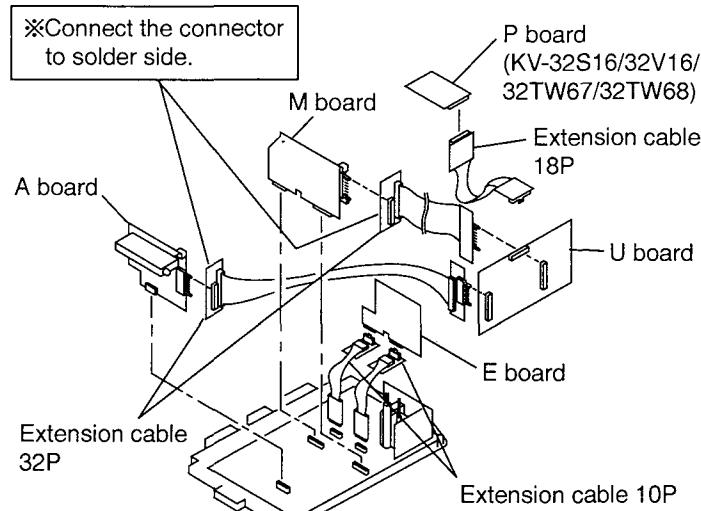
**2-4. P BOARD REMOVAL
(KV-32S16 U model/32V16/32TW67/32TW68)**



2-5. U BOARD REMOVAL



2-6. EXTENSION CABLE

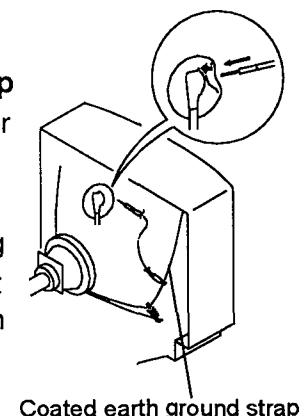


2-7 PICTURE TUBE REMOVAL

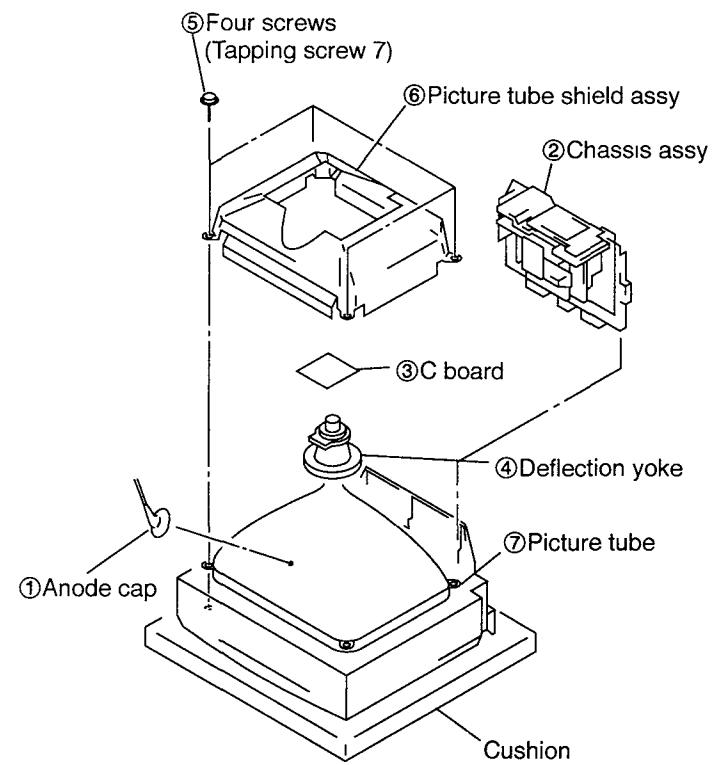
WARNING : Before removing anode cap

H. V. remains in the CRT even after the power is disconnected.

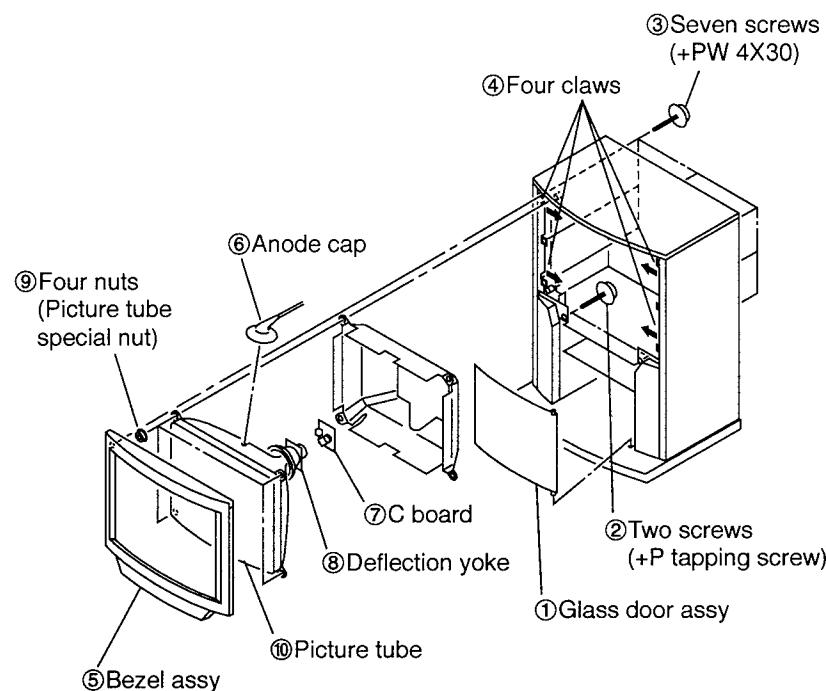
To avoid electrical shock, before attempting to remove the anode cap, discharge CRT : Short between anode and CRT coated earth ground strap.



(1) KV-32S12/32S16/32V16



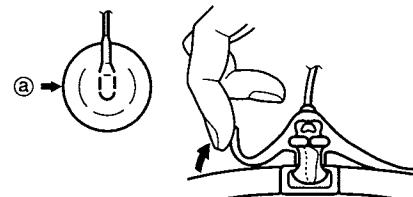
(2) KV-32TW67/32TW68



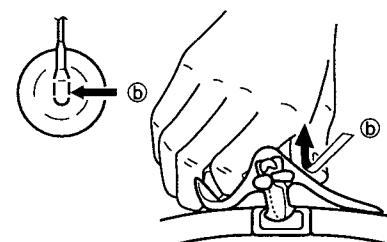
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis. CRT shield or carbon painted on the CRT, after removing the anode.

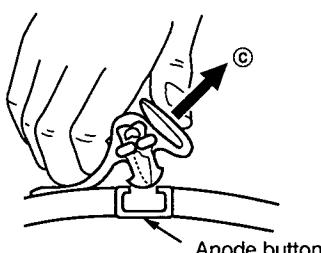
• REMOVING PROCEDURES



- ① Turn up one side of the rubber cap in the direction indicated by the arrow ④.



- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⑤.



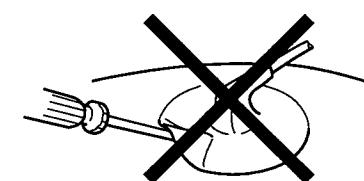
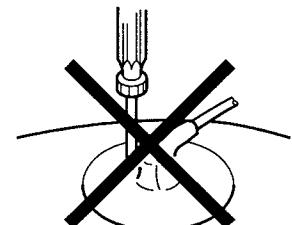
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑥.

• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.

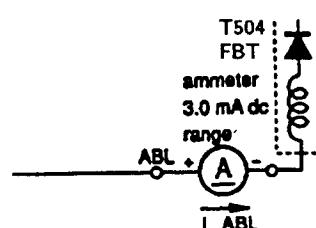
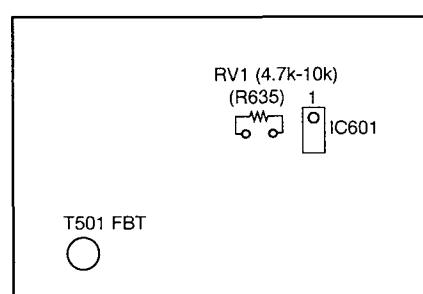


SECTION 3

SAFETY RELATED ADJUSTMENTS

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
D BOARD <div style="border: 1px solid black; padding: 5px;"> <input checked="" type="checkbox"/> *RESISTOR CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS </div> <p>The following adjustments should always be performed when replacing the following components (*marked with <input checked="" type="checkbox"/> on the schematic diagram).</p>		<input checked="" type="checkbox"/> marked parts IC601, PM501, D504, C598, R338, R509, R524, R632, R635, R645, T501	* <input checked="" type="checkbox"/> R524	
1. Preparation before confirmation 1) Turn the POWER switch ON, and receive *signal and set the *PICTURE and BRIGHTNESS controls to adjustment. 2) Confirm that the voltage of the check terminal of *TP is more than *voltage when the set is operating normally with *Power supply.	*Entirely white *Digital multimeter	*TP85 (H. PROT)	*PICTURE BRIGHTNESS } maximum	*122.3V DC 32 inch only *120 ± 2.0 VAC (Power Supply) D BOARD - CONDUCTOR SIDE -

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>2. Hold-down operation confirmation (HV)</p> <ol style="list-style-type: none"> 1) Connect the *currentmeter between the *pin of *FBT and the land of it with connect polarity. 2) Receive *Signal and adjust the *ABL current to follows with the PICTURE and the BRIGHTNESS controls. 3) Connect the Digital Voltmeter and *DC power Supply via *DIODE to TP. 4) Increase the DC power voltage gradually until the Picture just blanks out. 5) Read the digital voltmeter indication. 6) Turn DC power Source off immediately. <p><u>*STANDARD</u></p>	<p>*Currentmeter</p> <p>*Entirely white</p> <p>*DC Power Supply</p>	<p>*FBT (T501) Pin ⑩</p> <p>*Via 1T40 to TP-85</p>		<p>*1760 ± 50µA</p> <p>*Less than 143.5 VDC</p>
<p>7) Receive *Signal and adjust the *ABL current to follows, with the PICTURE and the BRIGHTNESS controls.</p> <p>8) Repeat steps from (3) to (7).</p> <p><u>*STANDARD</u></p>	*Dot Signal			<p>*160 ± 50µA</p> <p>*Less than 144.1 VDC</p>

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>3. Hold -down readjustment When step 2 is not satisfied, readjustment should be performed by altering the resistance value of *Resistor (a component marked with <input checked="" type="checkbox"/>).</p> <p>*RESISTOR CONFIRMATION METHOD (B+ HOLD-DOWN CONFIRMATION) AND READJUSTMENTS</p> <p>The following adjustments should always be performed when replacing the following components (*marked with <input checked="" type="checkbox"/> on the schematic diagram).</p> <p>1.Preparation before confirmation</p> <ol style="list-style-type: none"> 1) Remove the *resistor on the D board and connect a *variable resistor between pin① of IC601 and B+ line. 2) Supply *AC voltage to with *variable auto-transformer. 	<p>* Variable auto-transformer.</p>	<p>* <input checked="" type="checkbox"/> marked parts PM501, R338, R511, R632, R645, R650</p>	<p>* <input checked="" type="checkbox"/> R524</p> <p>* <input checked="" type="checkbox"/> R511</p>	 <p>*R635 *RV1 : about 4.7 kΩ - 10kΩ *120 ± 2.0 VAC</p> 
				<p>MC-Service</p>

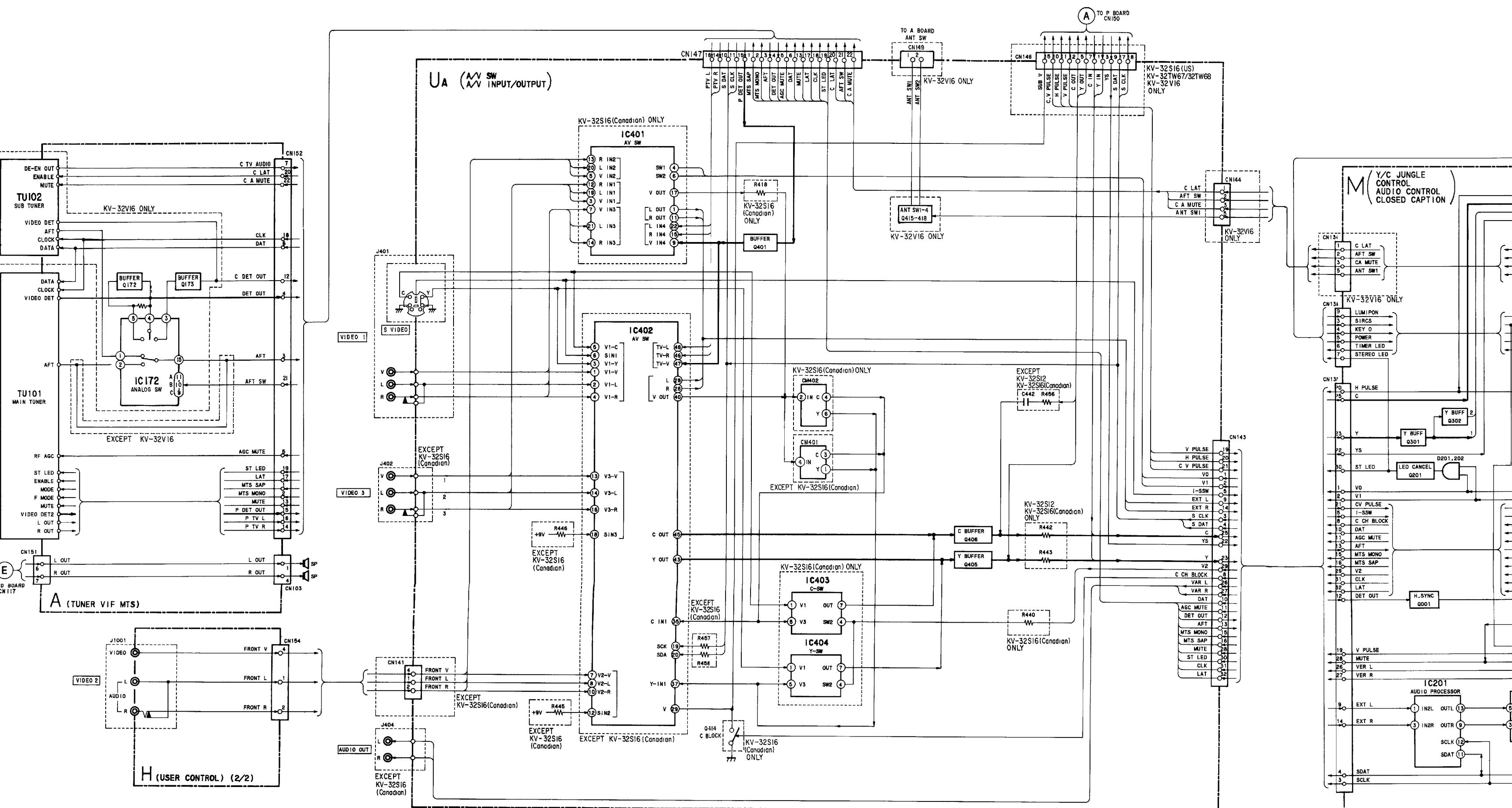
ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
2. Hold-down operation voltage (B+)				
1) Connect the *currentmeter between the *pin of FBT and the land of it with correct polarity.	*Currentmeter *Entirely white	*FBT (T501) Pin ⑩		* $1760 \pm 50\mu A$
2) Receive *Signal and adjust the *ABL current to follows with the PICTURE and the BRIGHTNESS controls.				
3) Connect the *Digital Multimeter to *TP.	*Digital Multimeter	*TP91 (+B)		
4) Increase the DC power voltage gradually by adjusting the resister of RV1 until the Picture just blanks out.				
5) Read the digital voltmeter indication.				
6) Turn DC power Source off immediately.				
<u>*STANDARD</u>				*Less than 140.0 VDC
7) Receive *Signal and adjust the *ABL current to follows, with the PICTURE and the BRIGHTNESS controls.	*Dot signal			* $160 \pm 50\mu A$
8) Repeat steps from 4) to 6).				*Less than 143.5 VDC
<u>*STANDARD</u>				
3. Hold-down readjustment				
When step 1 is not satisfied, readjustment should be performed by altering the resistance value of *resistor (a component marked with █).		* █R511		

ADJUSTMENT ITEM AND PROCEDURE	EQUIPMENT AND SIGNAL	MEASUREMENT POSITION	ADJUSTMENT LOCATION	ILLUSTRATION AND SHAPE AND NUMBER
<p>B+ VOLTAGE CONFIRMATION</p> <p>The following adjustments should always be performed when replacing the following *components.</p> <p>1) Supply *Voltage AC to with *variable auto-transformer.</p> <p>2) Input an entirely *signal.</p> <p>3) Set the PICTURE control and the BRIGHTNESS control to adjustment.</p> <p>4) Confirm the voltage of *TP is less than *Voltage DC.</p> <p>5) If step 4) is not satisfied, replace the *components repeat above steps.</p>	<p>*Variable auto-transformer *Monoscope</p>	<p>*IC601, R635 *TP91 (+B)</p>	<p>*PICTURE, BRIGHTNESS initial reset *IC602, R635</p>	<p>*120 $^{+2.0}_{-0}$ V AC *Less than 137.0 VDC</p>

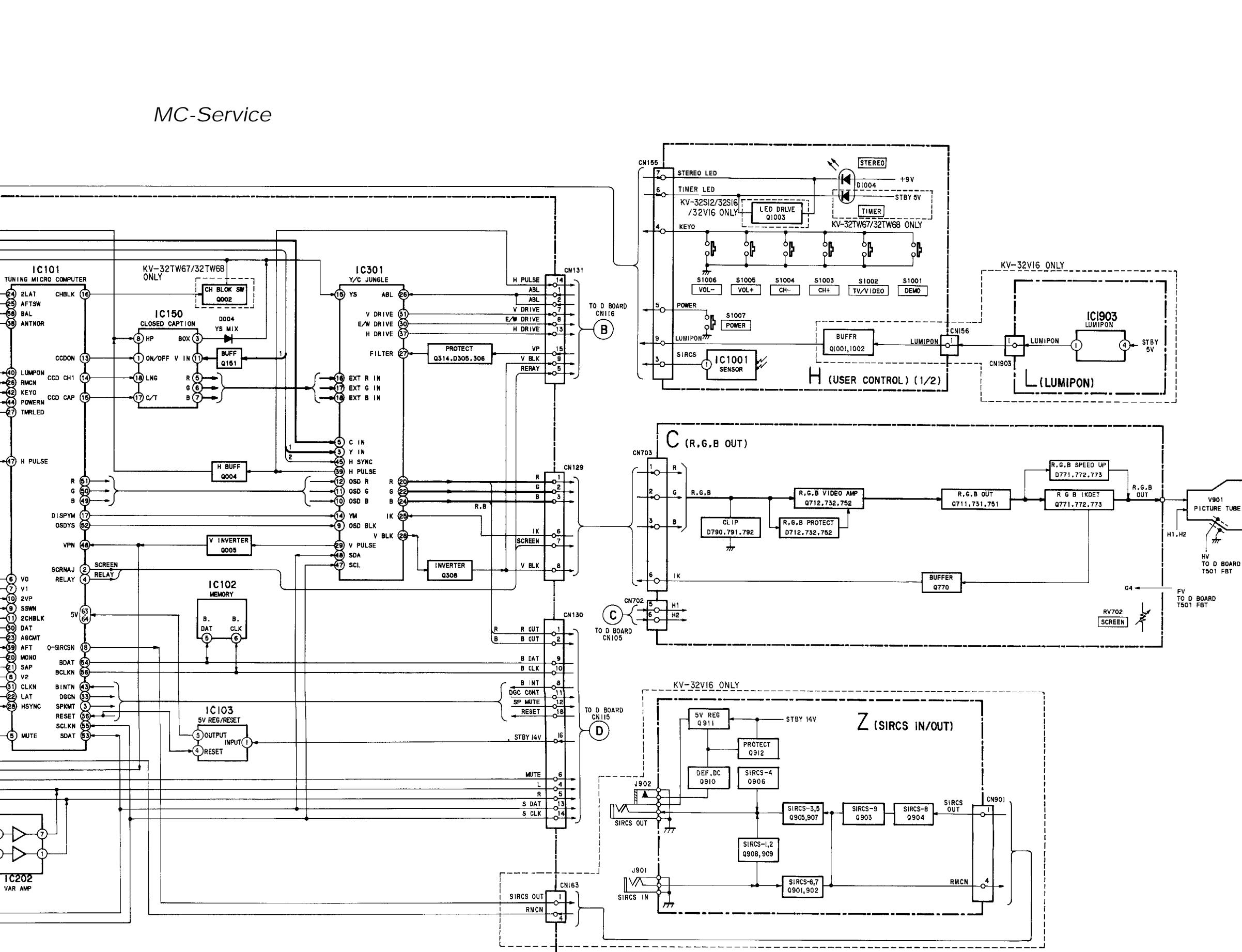
SECTION 4
DIAGRAMS

MC-Service

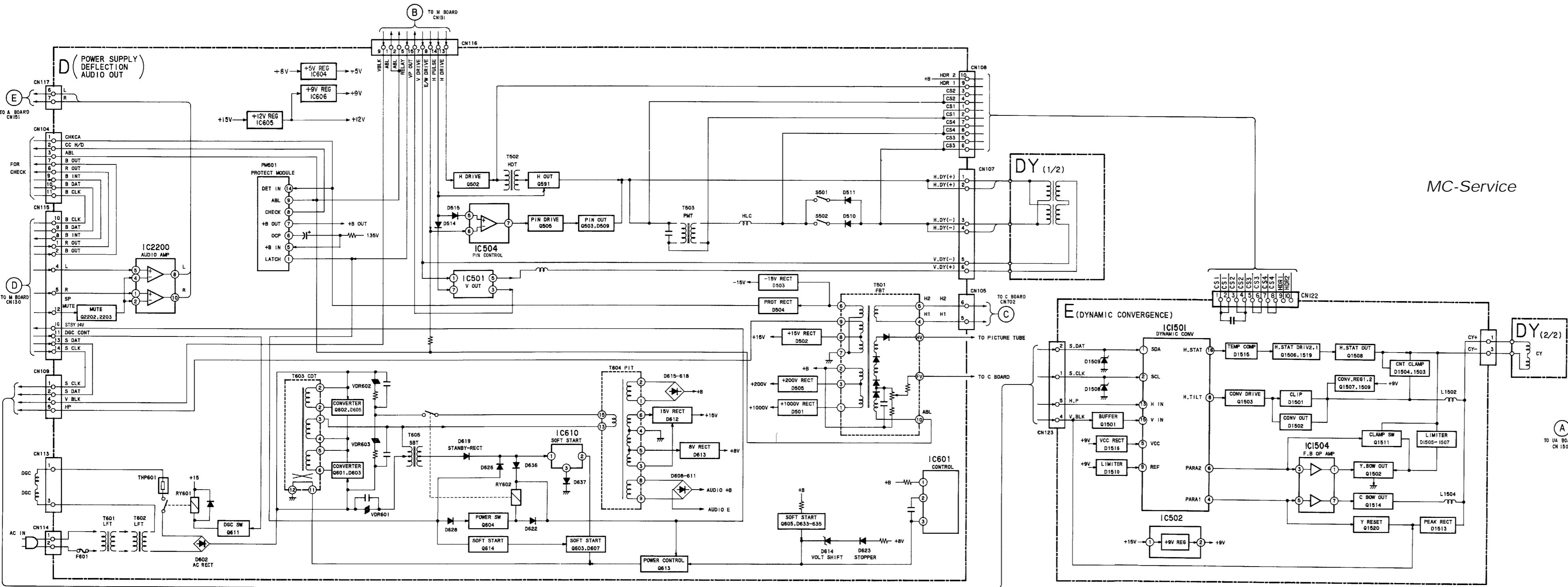
4-1. BLOCK DIAGRAMS (1)



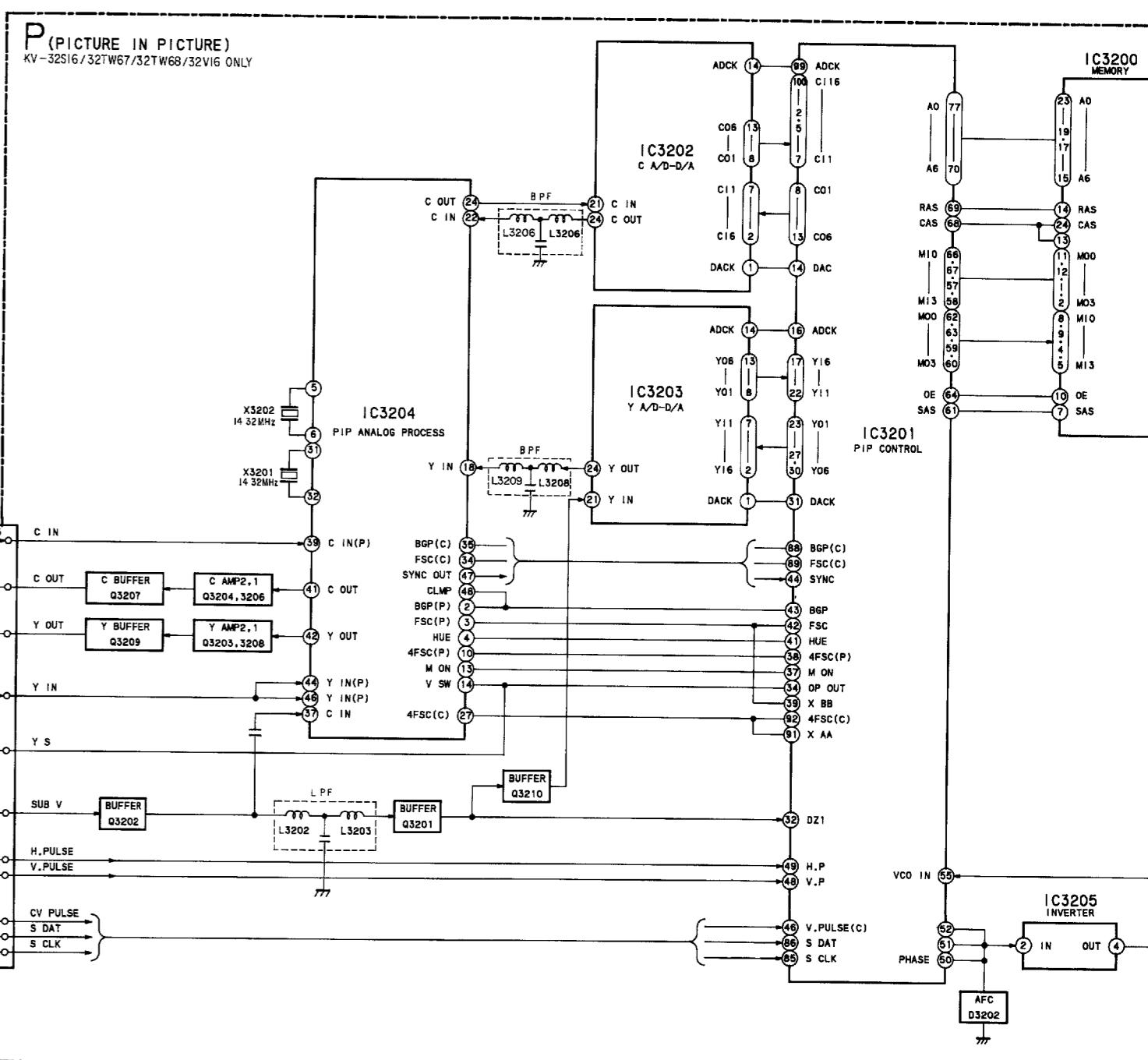
MC-Service



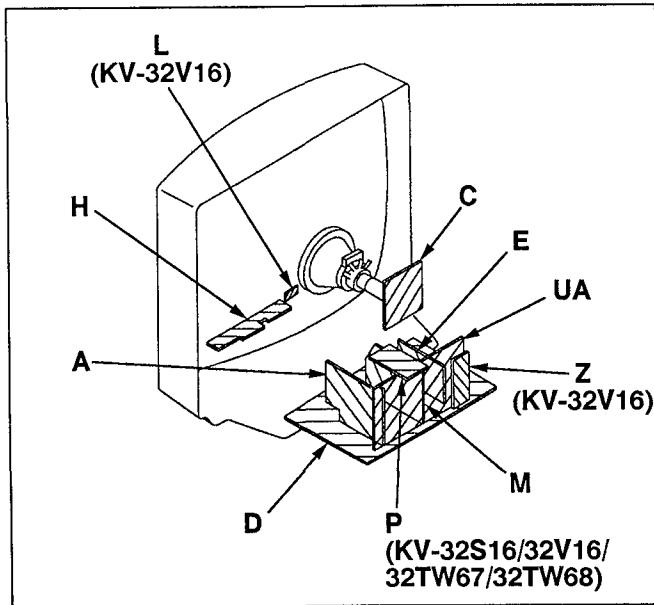
4-2. BLOCK DIAGRAMS (2)



MC-Service



4-3. CIRCUIT BOARDS LOCATION



4-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note :

- All capacitors are in μF unless otherwise noted. $\text{pF} : \mu\mu\text{F}$ 50V or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.
 $k\Omega = 1000\Omega$, $M\Omega = 1000k\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm
Rating electrical power : $1/4\text{W}$

- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by , make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved. (Refer to R511 and R524 adjustment on Page 20, 25.)
- When replacing the part in below table, be sure to perform the related adjustment.

Part replaced (Adjustment (
PM501, R511, R632, R645, R650 R338	D BOARD M BOARD
IC601, PM501, D504, C598, R509, R524, R632, R635, R645, T501 R338	D BOARD M BOARD

- As to the voltage value shown by the semiconductors on the Schematic Diagram, see the another list.
- Readings are taken with a color-bar signal input.
- Readings are taken with a $10M\Omega$ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.

- All voltages are in V.

* : Measurement impossibility.

- : B + line

- : B - line

(Actual measured value may be different)

- : signal path.(RF)

- Circle numbers are waveform references.

Reference information

RESISTOR	: RN METAL FILM
	: RC SOLID
	: FPRD NONFLAMMABLE CARBON
	: FUSE NONFLAMMABLE FUSIBLE
	: RW NONFLAMMABLE WIREWOUND
	: RS NONFLAMMABLE METAL OXIDE
	: RB NONFLAMMABLE CEMENT
	: \ddagger ADJUSTMENT RESISTOR
COIL	: LF-8L MICRO INDUCTOR
CAPACITOR	: TA TANTALUM
	: PS STYROL
	: PP POLYPROPYLENE
	: PT MYLAR
	: MPS METALIZED POLYESTER
	: MPP METALIZED POLYPROPYLENE
	: ALB BIPOLAR
	: ALT HIGH TEMPERATURE
	: ALR HIGH RIPPLE

Note: The symbol display is on the component side.

The components identified by shading and mark Δ are critical for safety. Replace only with part number specified.

The symbol indicate fast operating fuse. Replace only with fuse of same rating as marked.

Note: Les composants identifiés par un trame et une marque Δ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Le symbole indique une fusible à action rapide. Doit être remplacée par une fusible de même valeur, comme maqué.

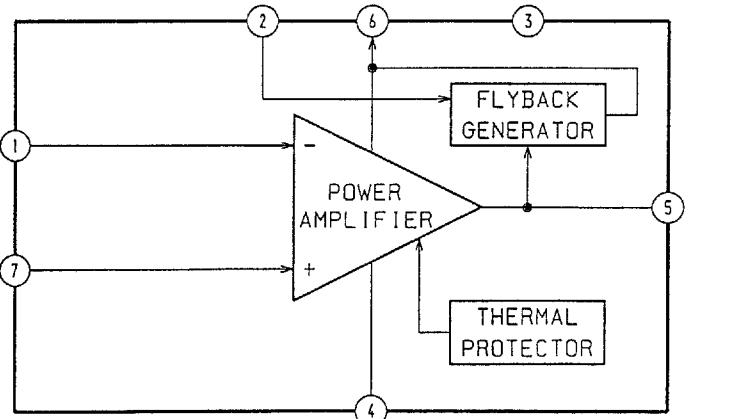
MC-Service

D [POWER SUPPLY,
DEFLECTION,
AUDIO OUT]

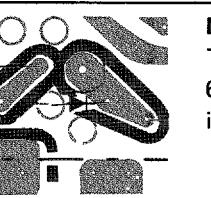
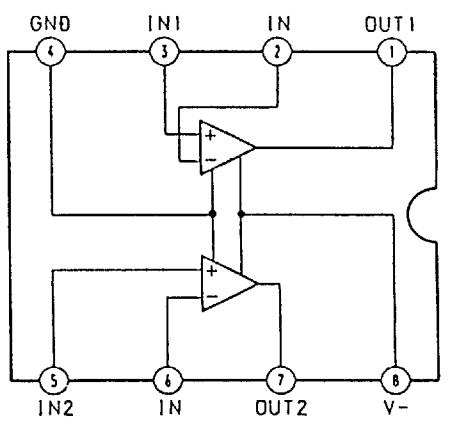
MC-Service

- D BOARD -

D BOARD IC501 TDA8172



D BOARD IC504 μPC393C

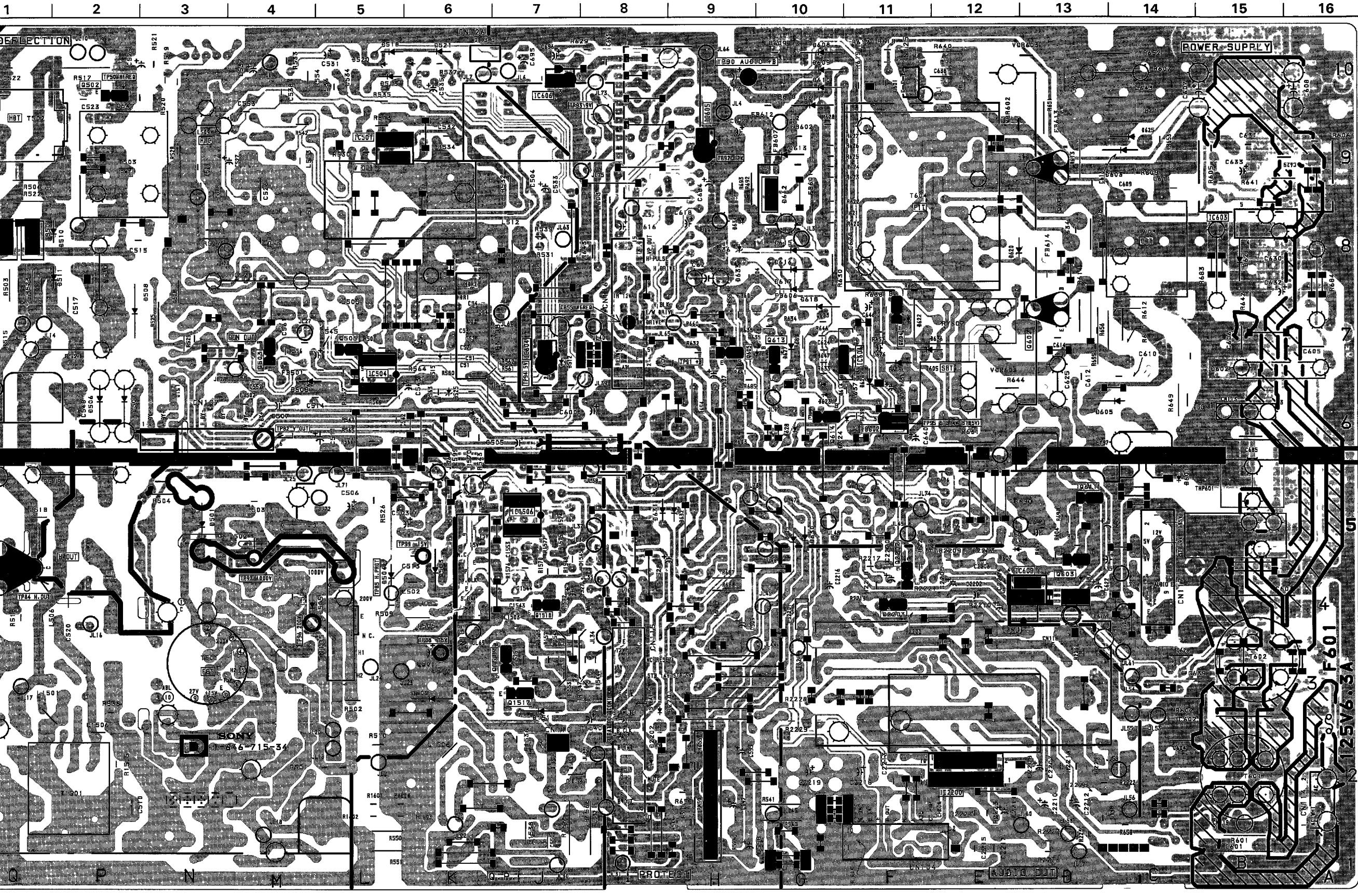


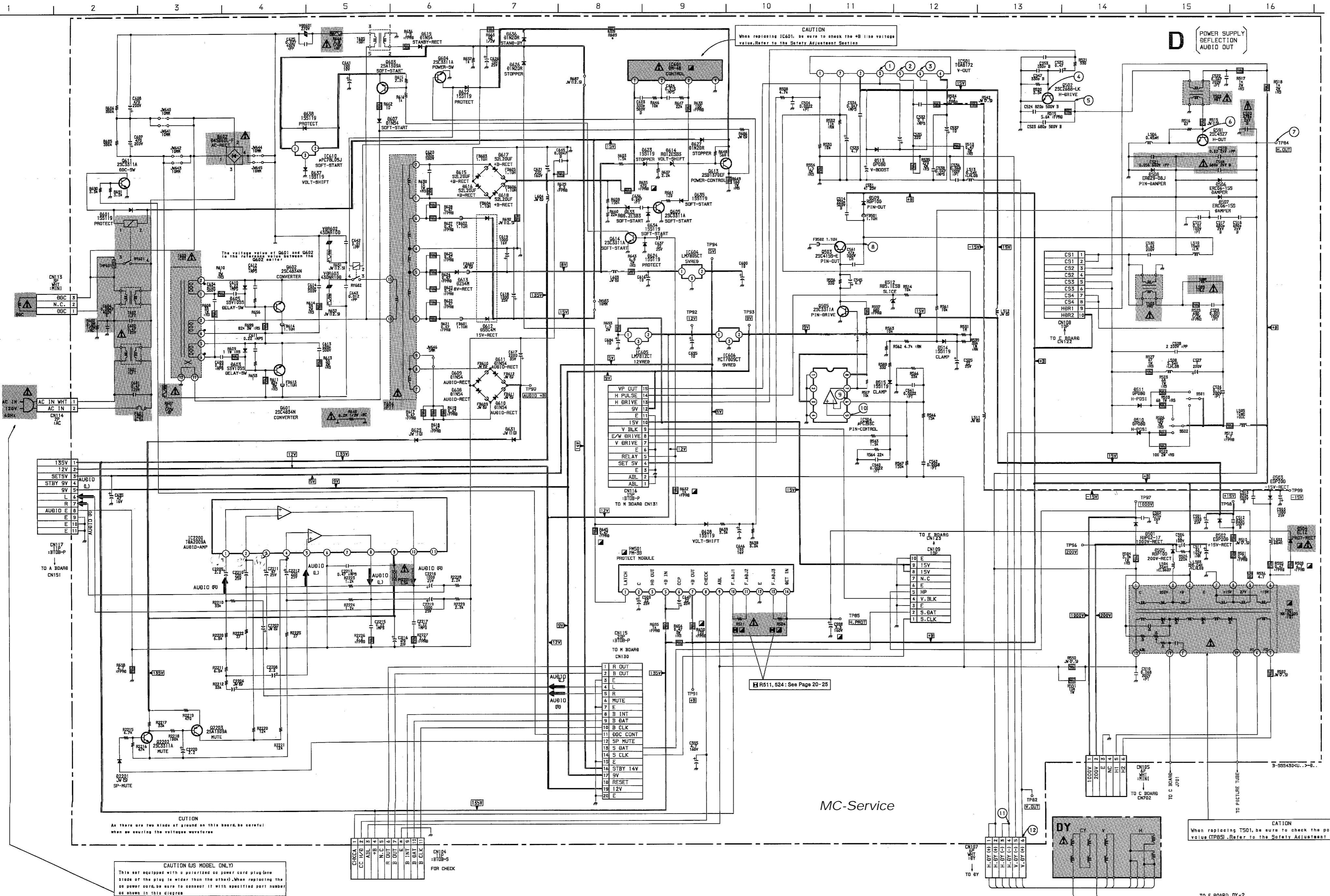
NOTE:

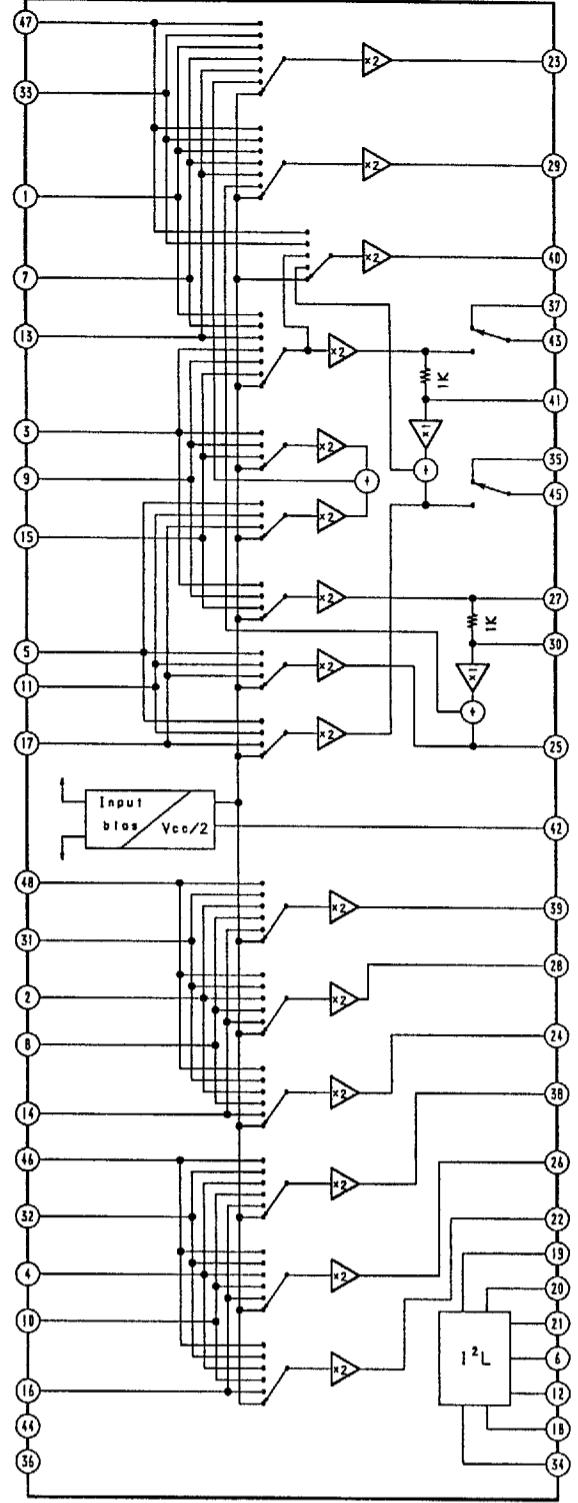
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

D BOARD

IC	
IC501	B - 5
IC504	D - 5
IC601	D - 10
IC604	D - 7
IC605	B - 9
IC606	A - 7
IC610	G - 12
IC2200	I - 12
TRANSISTOR	
Q502	A - 2
Q503	D - 4
Q505	D - 5
D591	G - 1
Q601	B - 13
Q602	D - 13
Q603	G - 13
Q604	D - 11
Q605	D - 9
Q611	F - 13
Q613	D - 10
Q614	E - 10
Q2202	G - 11
Q2203	G - 11
DIODE	
D501	F - 3
D502	H - 6
D503	G - 6
D604	G - 5
D505	G - 4
D506	E - 2
D507	E - 2
D508	D - 2



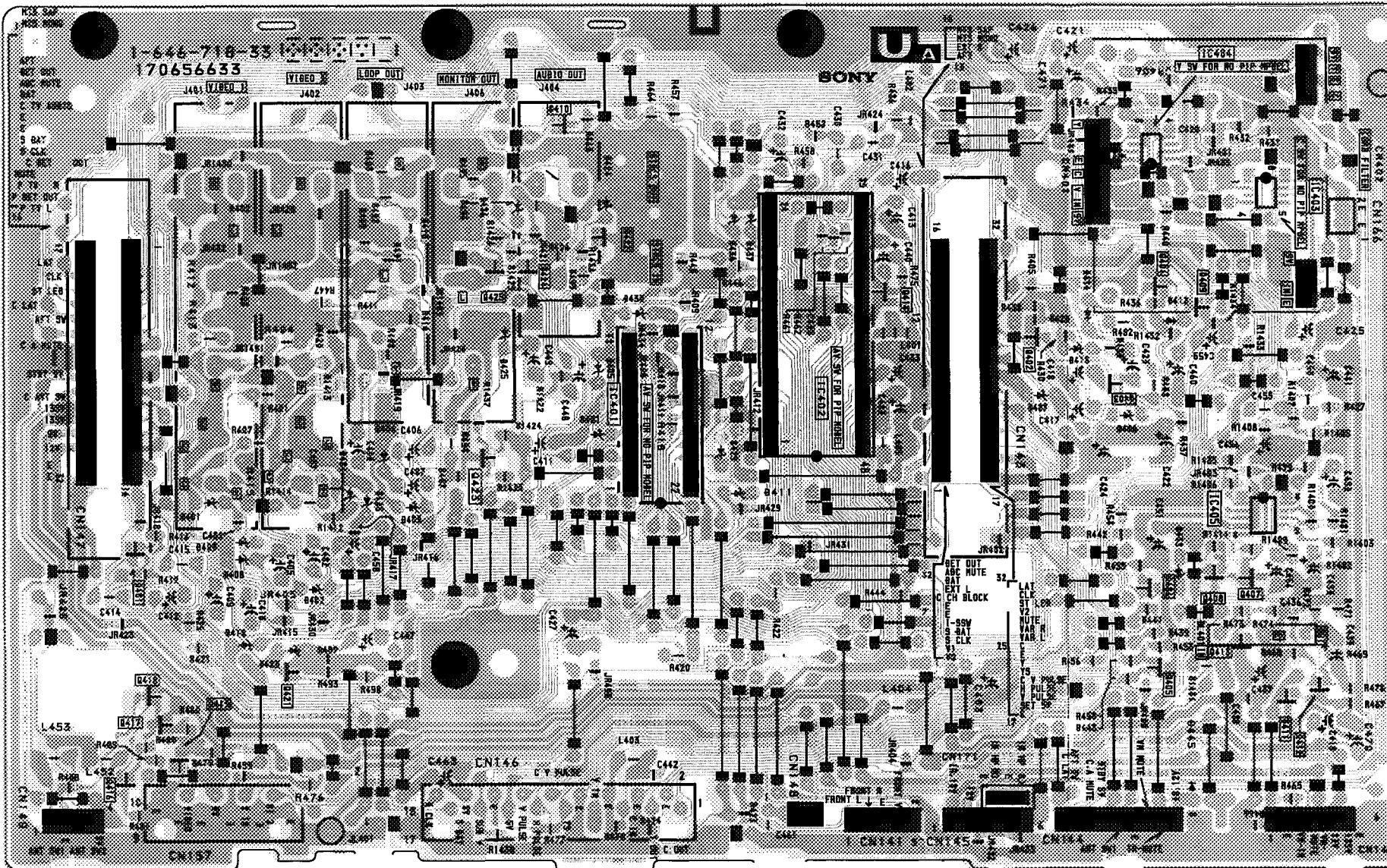


UA BOARD IC402 CXA1545AS

UA BOARD * MARK

Ref	Location	KV-32S12	KV-32S16 (US)	KV-32S16 (CND)	KV-32TW67/ 32TW68	KV-32V16
C408	F - 5	1	1	-	1	1
C409	F - 6	1	1	-	1	1
C408	F - 5	22/25V	22/25V	-	22/25V	22/25V
C411	D - 6	-	-	-	-	-
C411	I - 10	0.47	0.47	-	0.47	0.47
C416	I - 10	0.47	0.47	-	0.47	0.47
C427	B - 5	JW (5.0)	JW (5.0)	-	JW (5.0)	JW (5.0)
C430	F - 8	-	-	-	-	1
C432	G - 7	-	-	-	22/25V	-
C433	F - 8	32/25V	32/25V	-	33/25V	33/25V
C434	F - 8	100P	100P	-	100P	100P
C440	F - 9	-	-	-	10	-
C442	C - 6	-	10K	10K	-	10K
C442	B - 5	JW (5.0)	JW (5.0)	-	JW (5.0)	JW (5.0)
C446	E - 8	100/16V	100/16V	-	100/16V	100/16V
C449	F - 10	22/25V	22/25V	0.47	22/25V	22/25V
C451	F - 10	22/25V	22/25V	0.47	22/25V	22/25V
C460	D - 10	○	○	○	-	○
C462	D - 10	-	-	-	○	-
C463	A - 4	SP	SP	-	SP	SP
C464	C - 14	2P	2P	-	2P	2P
C464	G - 14	-	-	-	-	-
C465	A - 5	18P	18P	-	18P	18P
C468	A - 5	2P	2P	-	2P	2P
C469	J - 11	-	-	-	4P	-
C470	D - 10	○	○	○	-	○
C471	D - 10	-	-	-	-	-
C472	D - 10	MT2J-T77-10B	MT2J-T77-10B	MT2J-T77-10B	MT2J-T77-10B	MT2J-T77-10B
C473	E - 8	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C474	F - 5	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C475	G - 8	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C476	H - 7	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C477	I - 7	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C478	J - 6	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C479	D - 7	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C480	E - 8	RD105SB	RD105SB	-	MT2J-T77-10B	MT2J-T77-10B
C481	F - 5	CONDUCTOR	CONDUCTOR	CHIP (2012)	CONDUCTOR	CONDUCTOR
C482	G - 8	CONDUCTOR	CONDUCTOR	CHIP (2012)	CONDUCTOR	CONDUCTOR
C483	H - 7	CONDUCTOR	CONDUCTOR	CHIP (2012)	CONDUCTOR	CONDUCTOR
C484	I - 6	CONDUCTOR	CONDUCTOR	CHIP (2012)	CONDUCTOR	CONDUCTOR
C485	J - 5	CONDUCTOR	CONDUCTOR	CHIP (2012)	CONDUCTOR	CONDUCTOR
C486	C - 8	CXA1545AS	CXA1545AS	CXA1545AS	CXA1545AS	CXA1545AS
C487	D - 10	-	-	-	MM1114XFF	MM1114XFF
C488	E - 10	-	-	-	MM1118XFF	MM1118XFF
C489	F - 10	-	-	-	-	-
C490	G - 9	-	-	-	-	-
C491	H - 8	-	-	-	-	-
C492	I - 7	-	-	-	-	-
C493	J - 6	-	-	-	-	-
C494	C - 7	-	-	-	-	-
C495	D - 6	-	-	-	-	-
C496	E - 5	-	-	-	-	-
C497	F - 4	-	-	-	-	-
C498	G - 3	-	-	-	-	-
C499	H - 2	-	-	-	-	-
C500	I - 1	-	-	-	-	-
C501	J - 0	-	-	-	-	-
C502	C - 9	-	-	-	-	-
C503	D - 8	-	-	-	-	-
C504	E - 7	-	-	-	-	-
C505	F - 6	-	-	-	-	-
C506	G - 5	-	-	-	-	-
C507	H - 4	-	-	-	-	-
C508	I - 3	-	-	-	-	-
C509	J - 2	-	-	-	-	-
C510	C - 8	-	-	-	-	-
C511	D - 7	-	-	-	-	-
C512	E - 6	-	-	-	-	-
C513	F - 5	-	-	-	-	-
C514	G - 4	-	-	-	-	-
C515	H - 3	-	-	-	-	-
C516	I - 2	-	-	-	-	-
C517	J - 1	-	-	-	-	-
C518	C - 7	-	-	-	-	-
C519	D - 6	-	-	-	-	-
C520	E - 5	-	-	-	-	-
C521	F - 4	-	-	-	-	-
C522	G - 3	-	-	-	-	-
C523	H - 2	-	-	-	-	-
C524	I - 1	-	-	-	-	-
C525	J - 0	-	-	-	-	-
C526	C - 6	-	-	-	-	-
C527	D - 5	-	-	-	-	-
C528	E - 4	-	-	-	-	-
C529	F - 3	-	-	-	-	-
C530	G - 2	-	-	-	-	-
C531	H - 1	-	-	-	-	-
C532	I - 0	-	-	-	-	-
C533	J - 1	-	-	-	-	-
C534	C - 5	-	-	-	-	-
C535	D - 4	-	-	-	-	-
C536	E - 3	-	-	-	-	-
C537	F - 2	-	-	-	-	-
C538	G - 1	-	-	-	-	-
C539	H - 0	-	-	-	-	-
C540	I - 1	-	-	-	-	-
C541	J - 0	-	-	-	-	-
C542	C - 4	-	-	-	-	-
C543	D - 3	-	-	-	-	-
C544	E - 2	-	-	-	-	-
C545	F - 1	-	-	-	-	-
C546	G - 0	-	-	-	-	-
C547	H - 1	-	-	-	-	-
C548	I - 0	-	-	-	-	-
C549	J - 1	-	-	-	-	-
C550	C - 3	-	-	-	-	-
C551	D - 2	-	-	-	-	-
C552	E - 1	-	-	-	-	-
C553	F - 0	-	-	-	-	-
C554	G - 1	-	-	-	-	-
C555	H - 0	-	-	-	-	-
C556	I - 1	-	-	-	-	-
C557	J - 0	-	-	-	-	-
C558	C - 2	-	-	-	-	-
C559	D - 1	-	-	-	-	-
C560	E - 0	-	-	-	-	-
C561	F - 1	-	-	-	-	-
C562	G - 0	-	-	-	-	-
C563	H - 1	-	-	-	-	-
C564	I - 0	-	-	-	-	-
C565	J - 1	-	-	-	-	-
C566	C - 1	-	-	-	-	-
C567	D - 0	-	-	-	-	-
C568	E - 1	-	-	-	-	-
C569	F - 0	-	-	-	-	-
C570	G - 1	-	-	-	-	-
C571	H - 0	-	-	-	-	-
C572	I - 1	-	-	-	-	-
C573	J - 0	-	-	-	-	-
C574	C - 0	-	-	-	-	-
C575	D - 1	-	-	-	-	-
C576	E - 0	-	-	-	-	-
C577	F - 1	-	-	-	-	-
C578	G - 0	-	-	-	-	-
C579	H - 1	-	-	-	-	-
C580	I - 0	-	-	-	-	-
C581	J - 1	-	-	-	-	-
C582	C - 1	-	-	-	-	-
C583	D - 0	-	-	-	-	-
C584	E - 1	-	-	-	-	-
C585	F - 0	-	-	-	-	-
C586	G - 1	-	-	-	-	-
C587	H - 0	-	-	-	-	-
C588	I - 1	-	-	-	-	-</

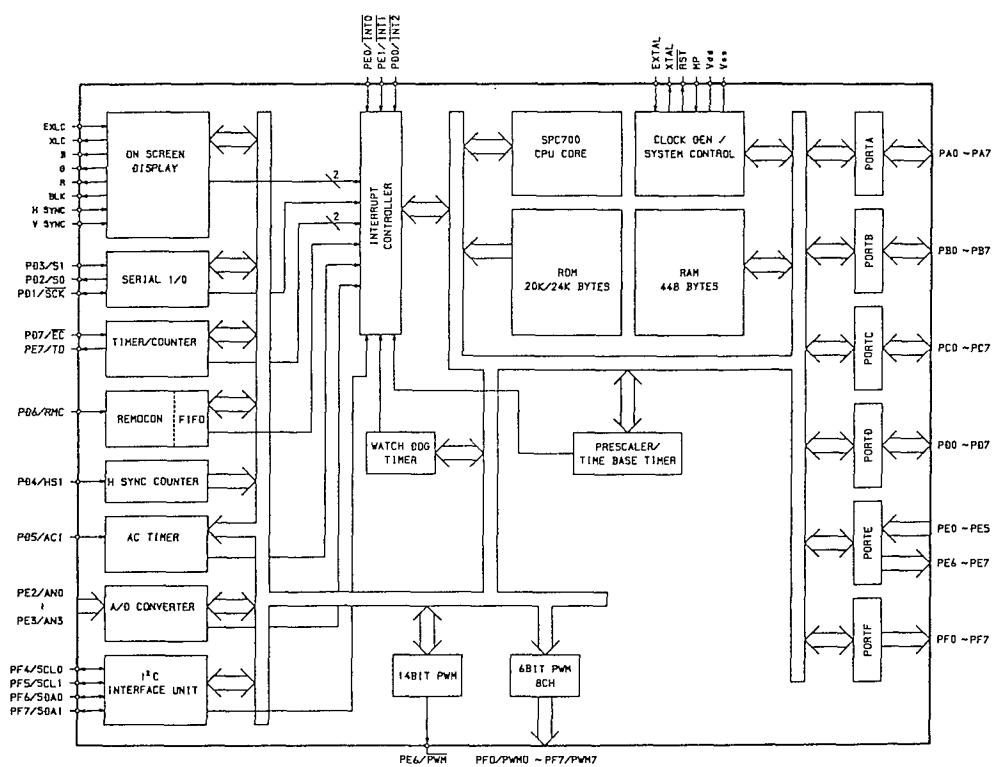
UA [A/V SW,
A/V INPUT,
A/V OUTPUT]

- UA BOARD -



MC-Service

M BOARD IC101 CXP80424



M BOARD

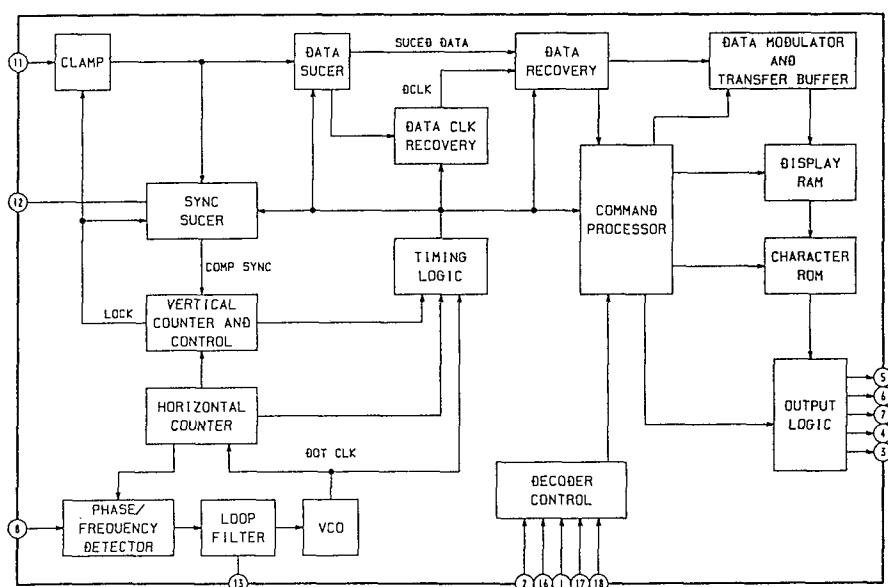
IC	
IC101	C - 6, H - 6
IC102	B - 7, I - 7
IC103	D - 4, G - 4
IC150	B - 4, I - 4
IC201	C - 2, H - 2
IC202	D - 1
IC301	C - 3, H - 3

TRANSISTOR	
Q001	E - 6
Q002	G - 5
Q004	H - 7
Q005	H - 7
Q151	G - 5
Q201	J - 1
Q301	A - 2
Q302	A - 2
Q308	E - 4

DIODE

D001	F - 6
D002	F - 6
D004	E - 4
D005	G - 6
D006	C - 7, I - 7
D007	C - 7, I - 7
D008	C - 7, I - 7
D009	C - 7, I - 7
D150	H - 5
D201	A - 1
D202	A - 1
D205	D - 2
D206	B - 2, I - 2
D301	B - 4, I - 4
D304	B - 4, I - 4

M BOARD IC150 Z8622812PSC



Note :

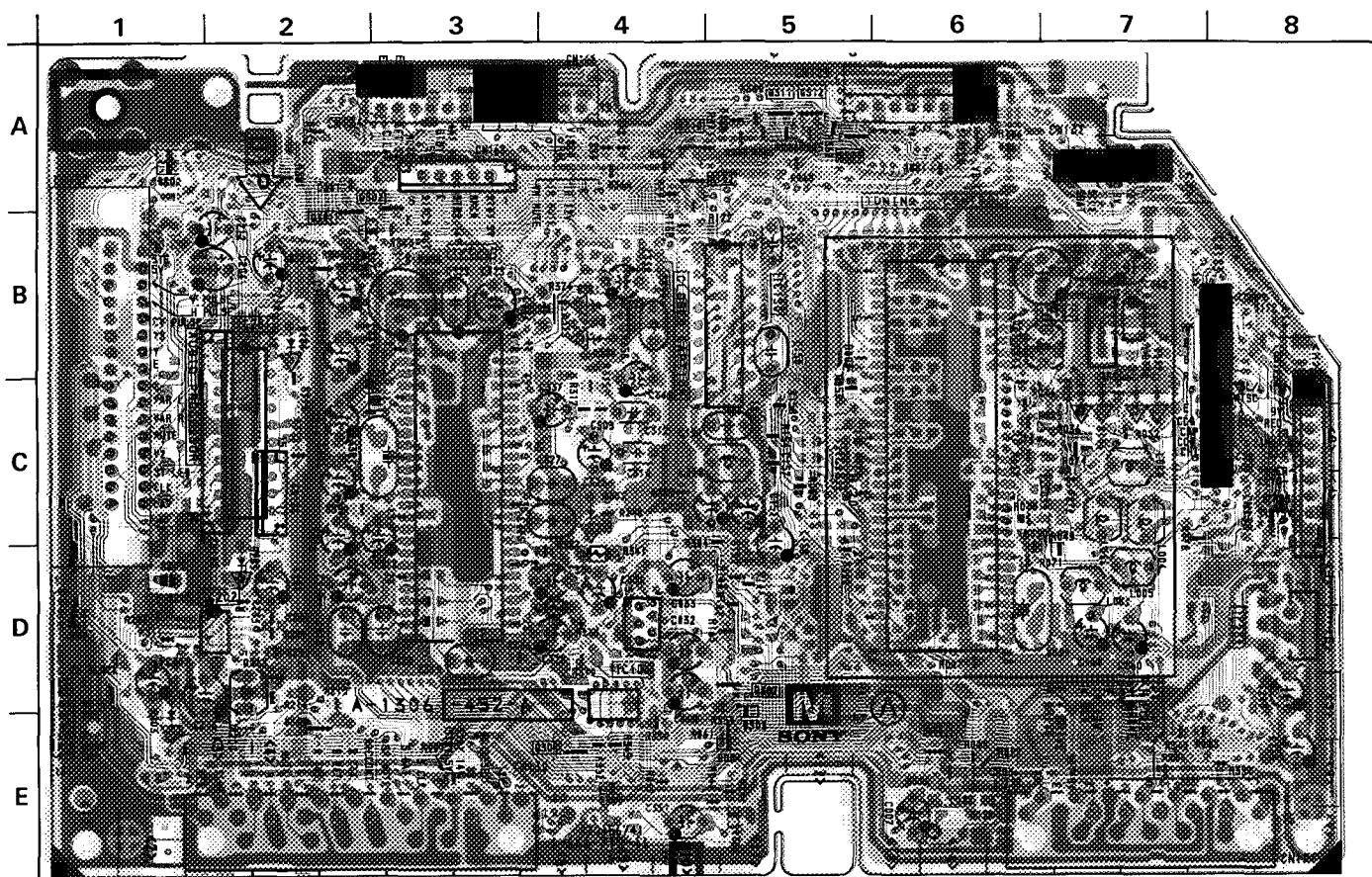
MC-Service

- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

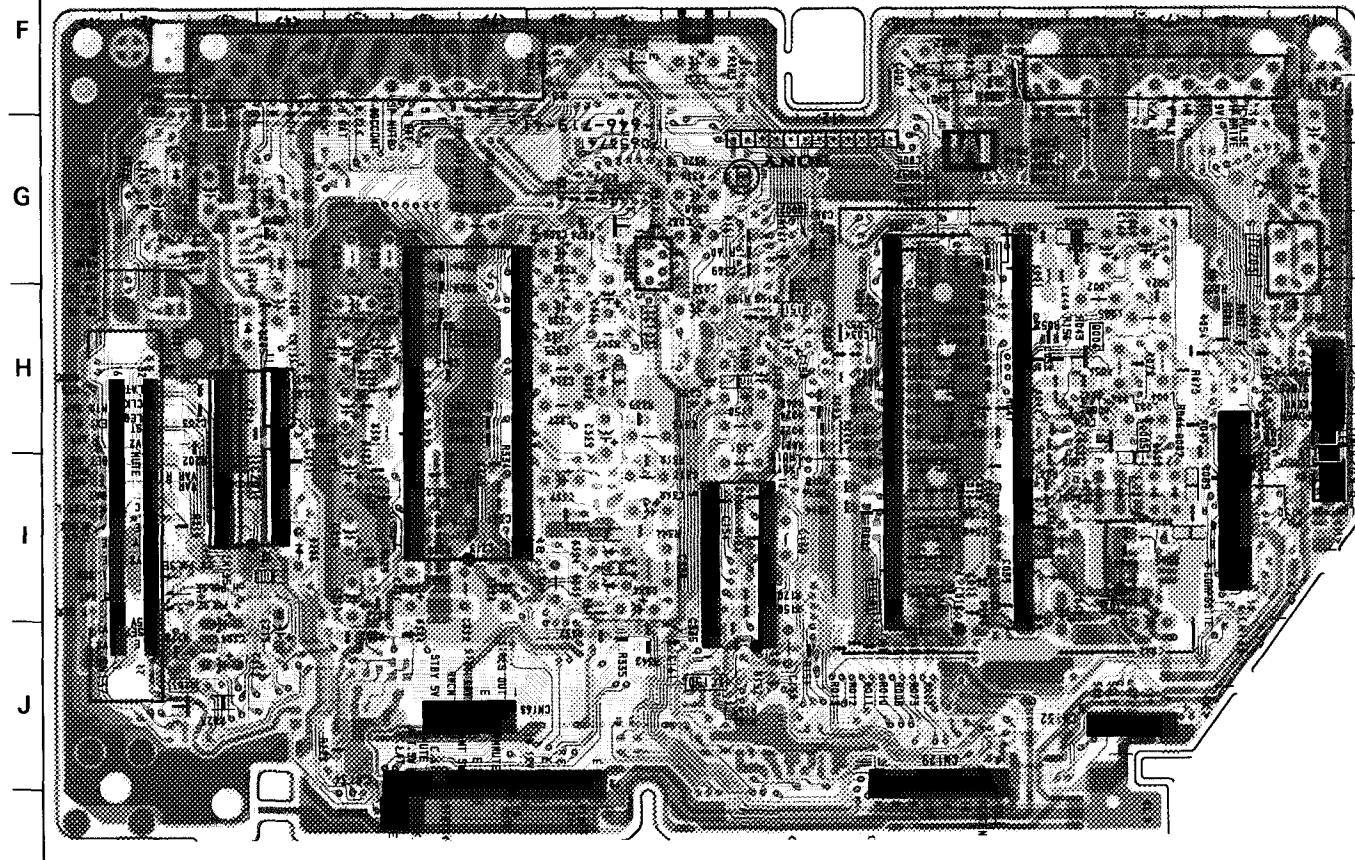
M Y/C/J, CONTROL,
AUDIO CONTROL,
CLOSED CAPTION

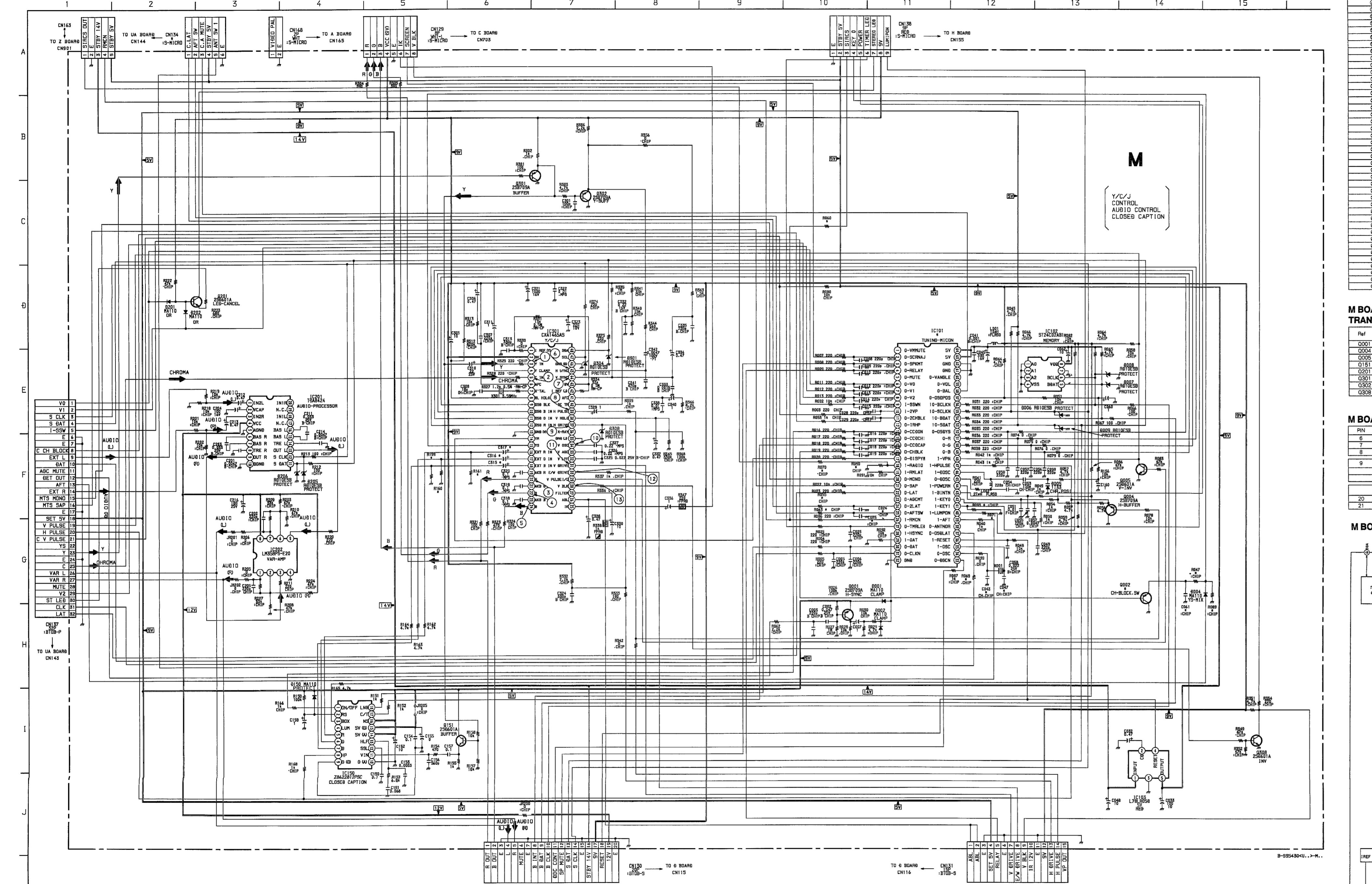
MC-Service

– M BOARD – <Component Side>



<Conductor Side>





MC-Service

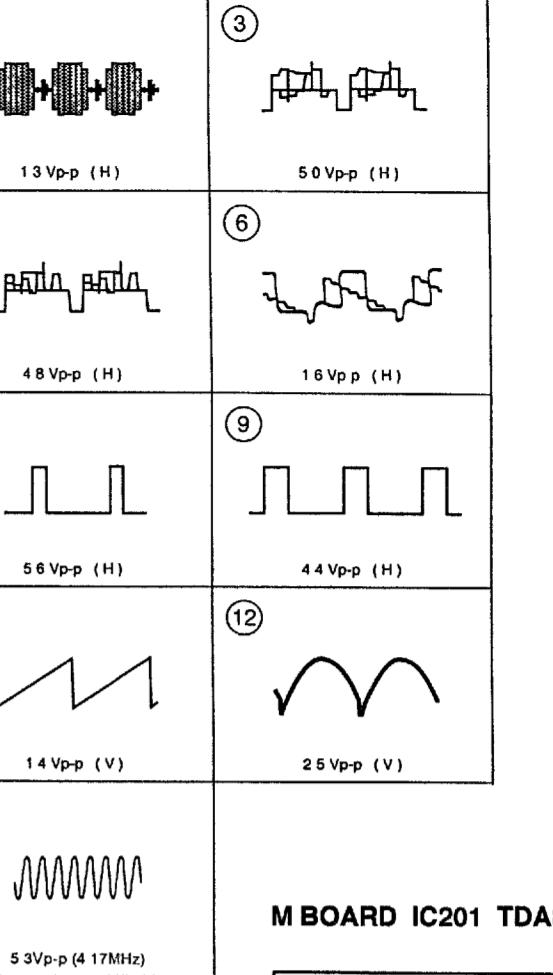
M BOARD IC VOLTAGE LIST

All voltages are in V

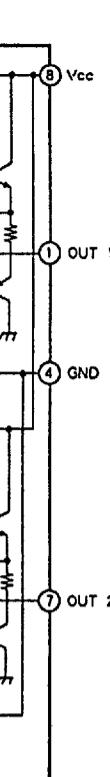
IC101①	0	0	0
E-11②	0	50	0
④ 49	50	51	0
⑤ 51	50	51	0
⑥ 51	26	54	50
⑦ 0	—	120	61
⑧ 0	—	62	22
⑨ 0	—	62	62
⑩ 0	—	62	20
⑪ 0	—	62	21
⑫ 0	—	62	08
⑬ 51	50	50	51
⑭ 51	50	50	76
⑮ 01	IC201①	62	43
⑯ 01	E-13②	62	30
⑰ 29	50	62	30
⑱ 49	50	50	49
⑲ 51	50	50	46
⑳ 51	50	50	42
㉑ 51	IC103①	140	—
㉒ 01	I-14②	58	29
㉓ 0	G-3②	62	28
㉔ 26	50	62	30
㉕ 75	62	62	29
㉖ 51	IC150①	0	40
㉗ 0	I-4②	62	79
㉘ 20	50	120	19
㉙ 02	50	50	20
㉚ 51	50	50	59
㉛ 51	50	50	34
㉜ 29	51	51	51
㉝ 09	18	24	41
㉞ 01	17	24	41
㉟ 0	15	0	0
㉟ 0	50	50	0
㉟ 0	50	50	0

— BLANK PIN

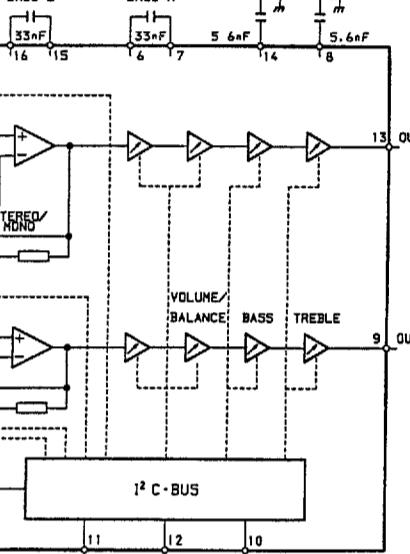
M BOARD WAVEFORMS



M BOARD IC202 LM358PS-E20



M BOARD IC201 TDA8424

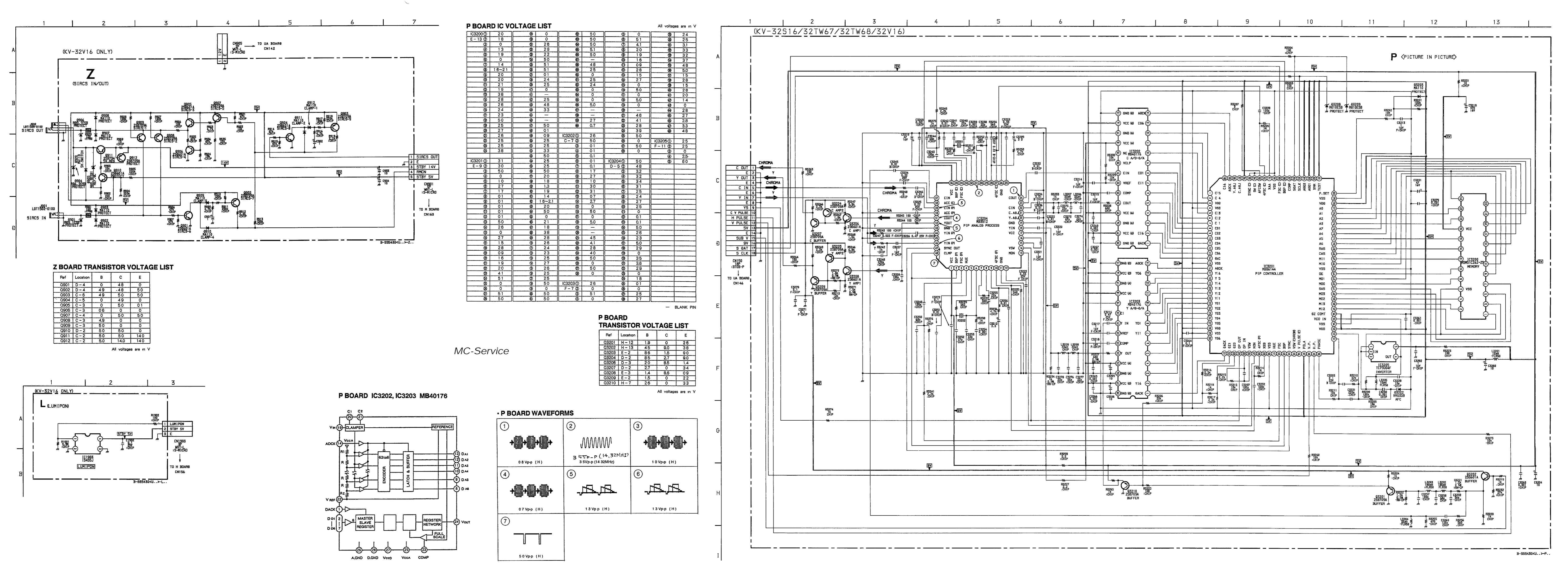


M BOARD TRANSISTOR VOLTAGE LIST

All voltages are in V

Ref	Location	B	C	E
Q001	H-10	5.2	0.9	5.0
Q004	G-4	0.3	0.9	0.9
Q005	F-14	0.6	0.1	0
Q011	I-5	1.4	5.0	0.8
Q021	D-3	2.2	0.2	2.0
Q032	C-3	2.2	0.2	2.0
Q032	C-4	2.5	0	3.0
Q038	I-15	0.6	0	0

— SP



P

[PICTURE IN PICTURE]

Z

[SIRCS IN/OUT]

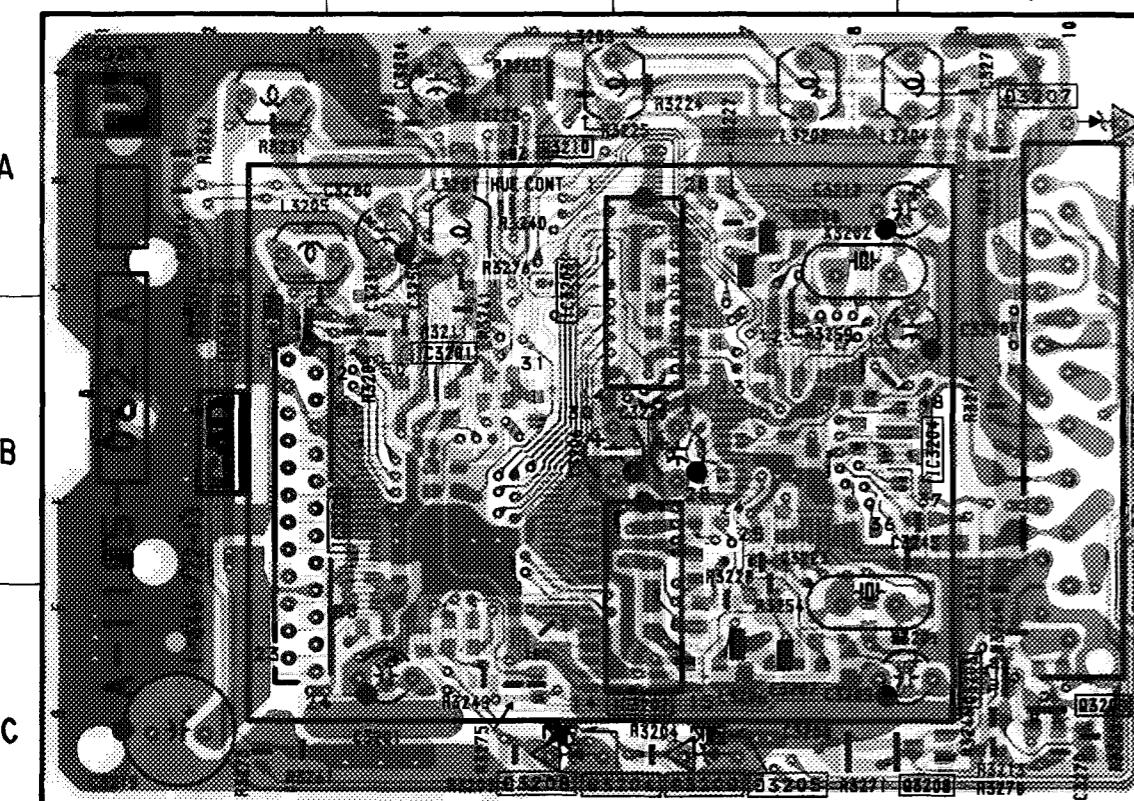
L

[LUMIPON]

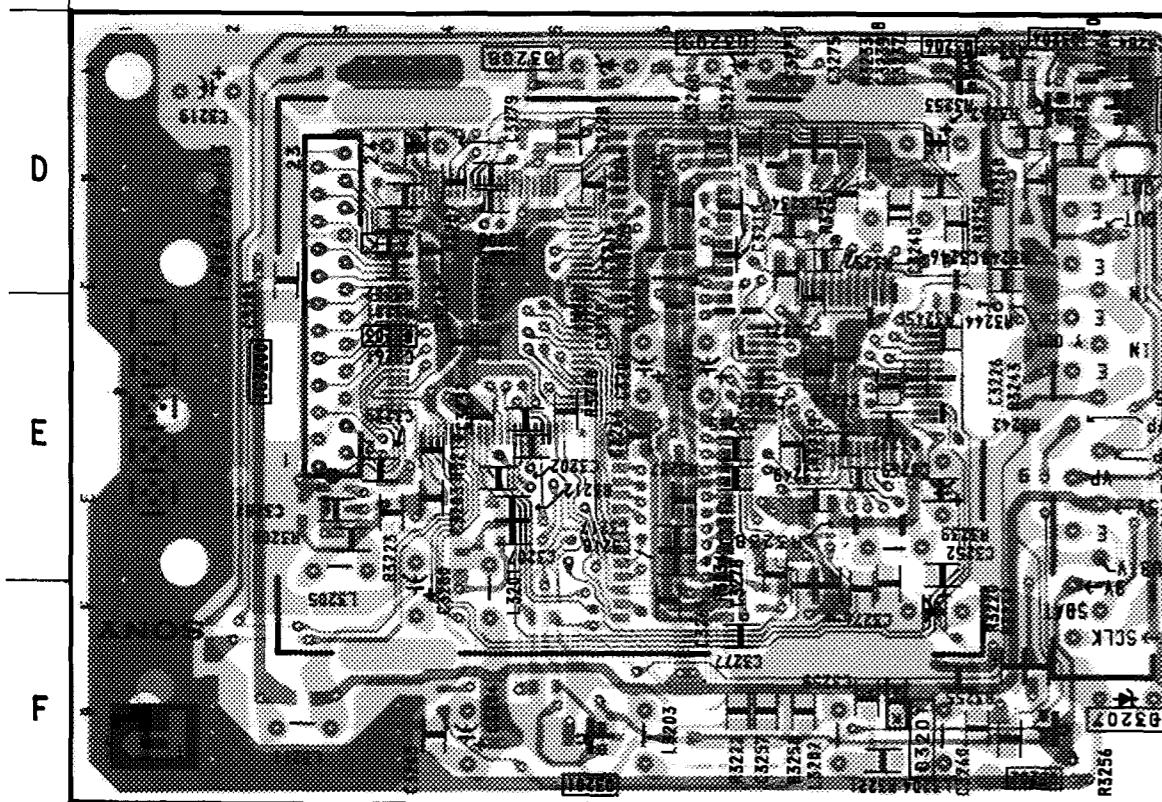
- P BOARD - <Component Side>

(KV-32S16/32TW67/32TW68/32V16 only)

1 2 3 4

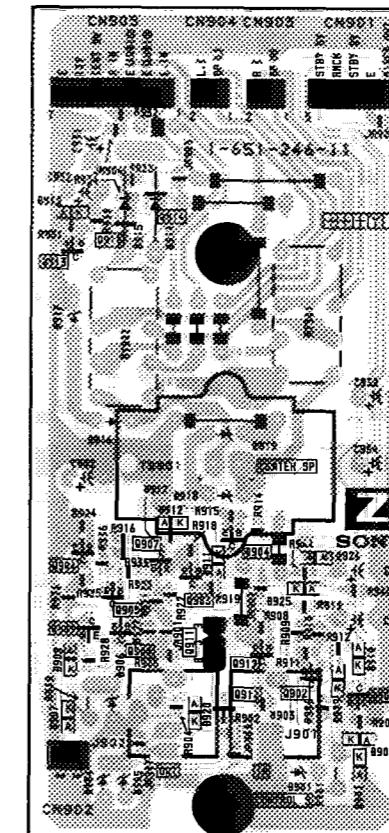


<Conductor Side>

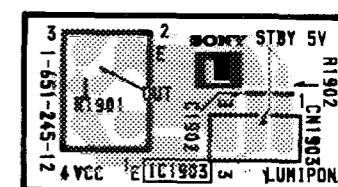


IC	
IC3200	E - 1
IC3201	B - 2
IC3202	C - 3
IC3203	B - 3
IC3204	B - 3
IC3205	B - 1
TRANSISTOR	
Q3201	F - 2
Q3202	F - 4
Q3203	C - 4
Q3204	D - 4
Q3206	D - 4
Q3207	D - 4
Q3208	C - 3
Q3209	C - 4
Q3210	A - 2
DIODE	
D3202	B - 1
D3203	D - 2
D3208	D - 2
D3209	D - 3

- Z BOARD - (KV-32V16 only)



- L BOARD - (KV-32V16 only)



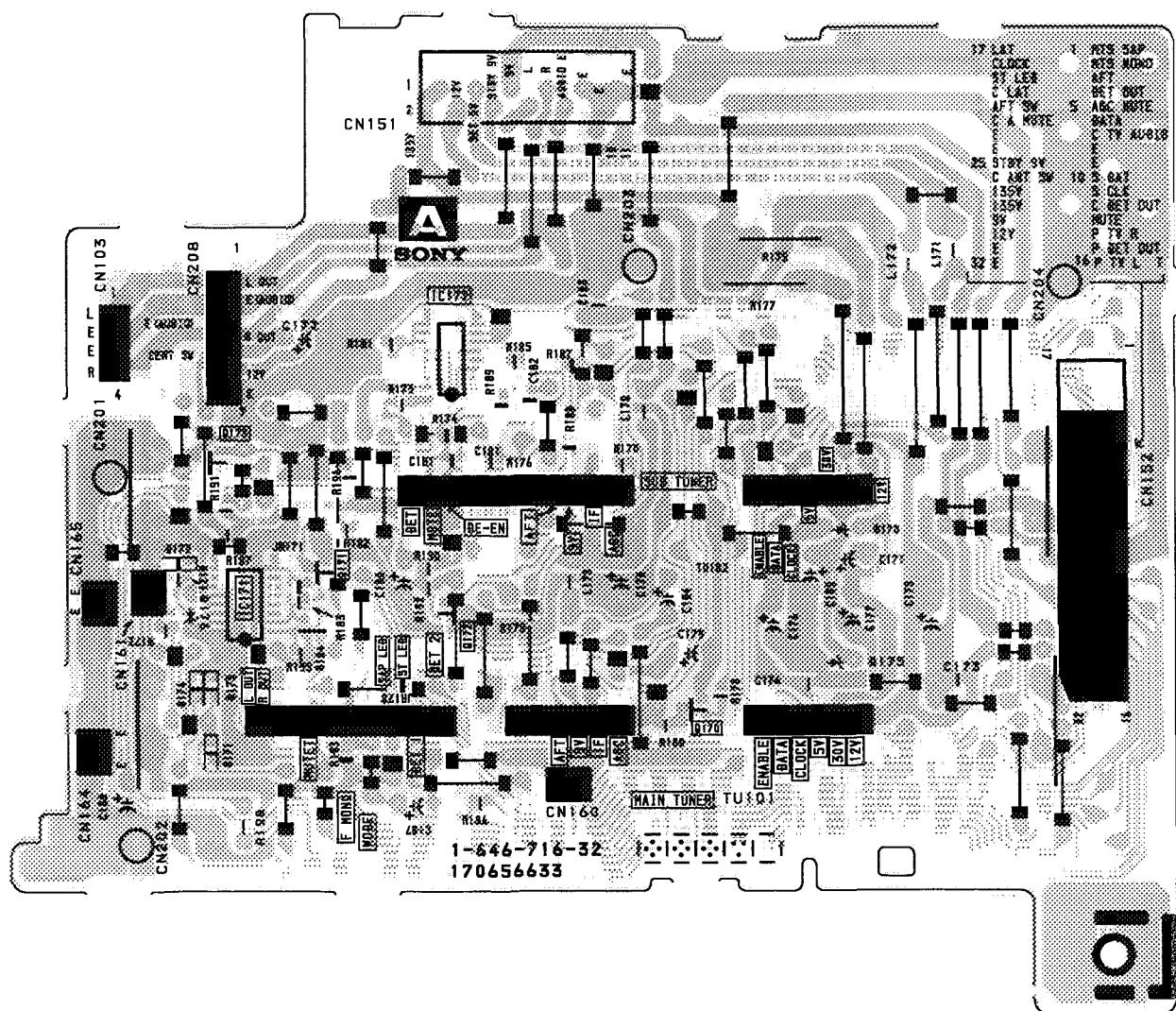
MC-Service

Note :

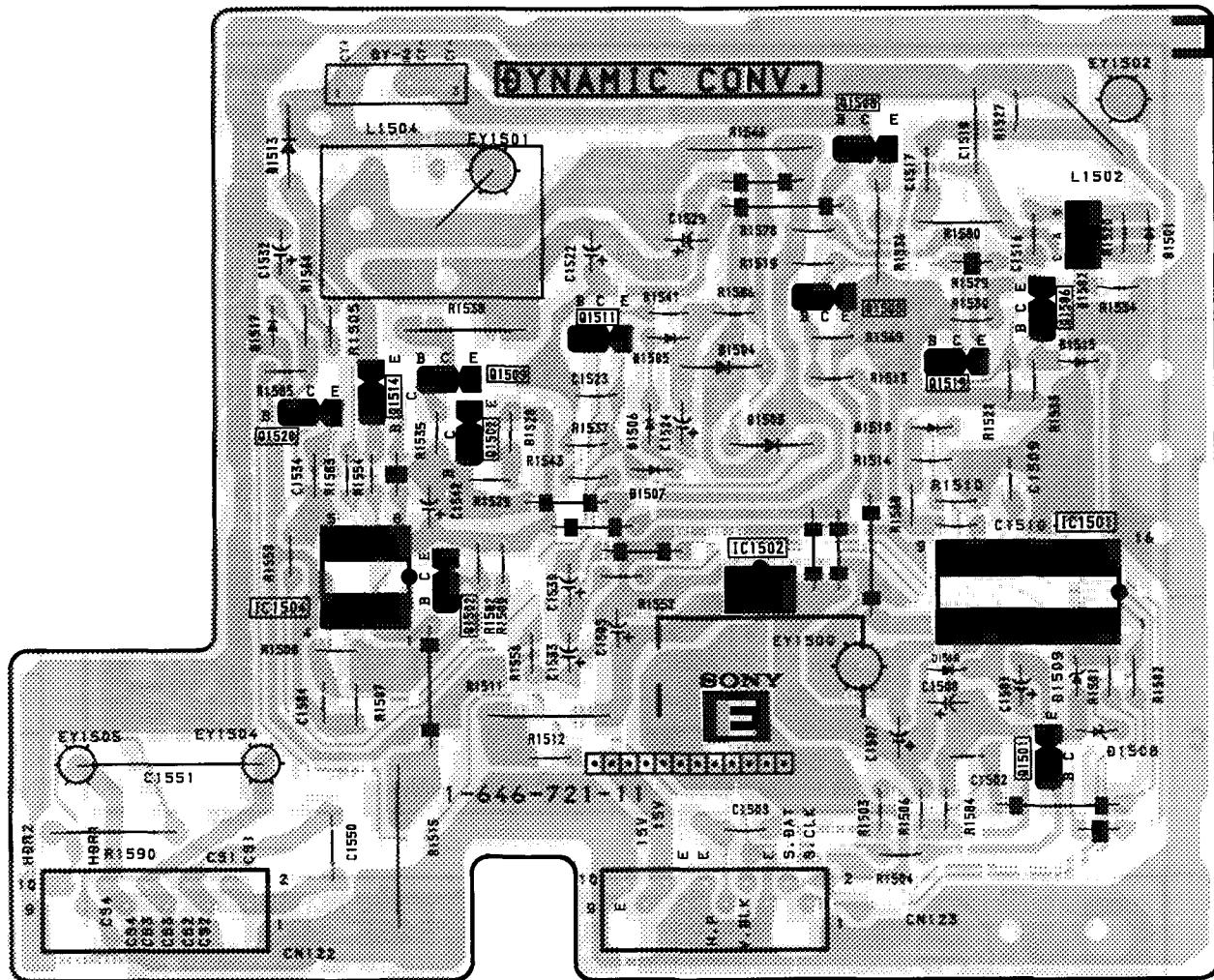
- ~ : Pattern from the side which enables seeing.
- < : Pattern of the rear side.

A

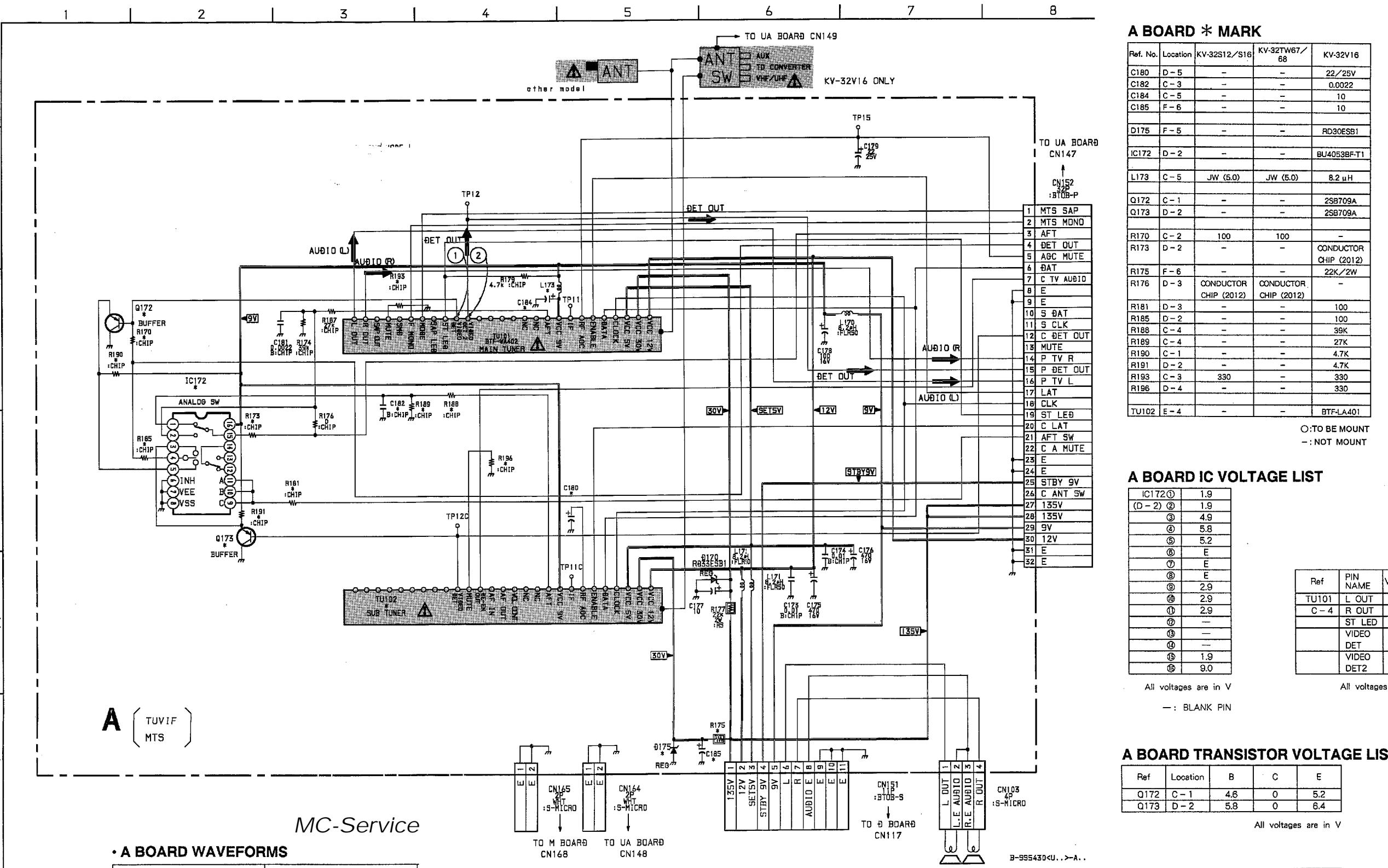
[TU VIF, MTS]

E[DYNAMIC,
CONVERGENCE]**- A BOARD -**

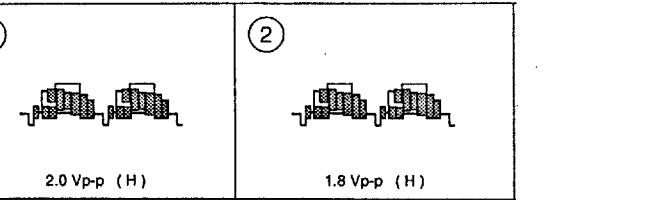
- E BOARD -



MC-Service



BOARD WAVEFORMS



Service

The diagram illustrates the distribution of proteins across three membrane regions (A, B, and C) and their interaction with the extracellular space (ECS). Region A is at the top, B is in the middle, and C is at the bottom.

- MT1:** Located in the ECS and Region A.
- RI2:** Located in the ECS and Region B.
- DISC:** Located in the ECS and Region C.
- ERBB2:** Located in Region A.
- HER3:** Located in Region A.

Regions A, B, and C are separated by dashed lines. The ERBB2 and HER3 proteins are shown as a complex in Region A. Arrows indicate interactions between the proteins and the MT1, RI2, and DISC proteins in the adjacent regions.

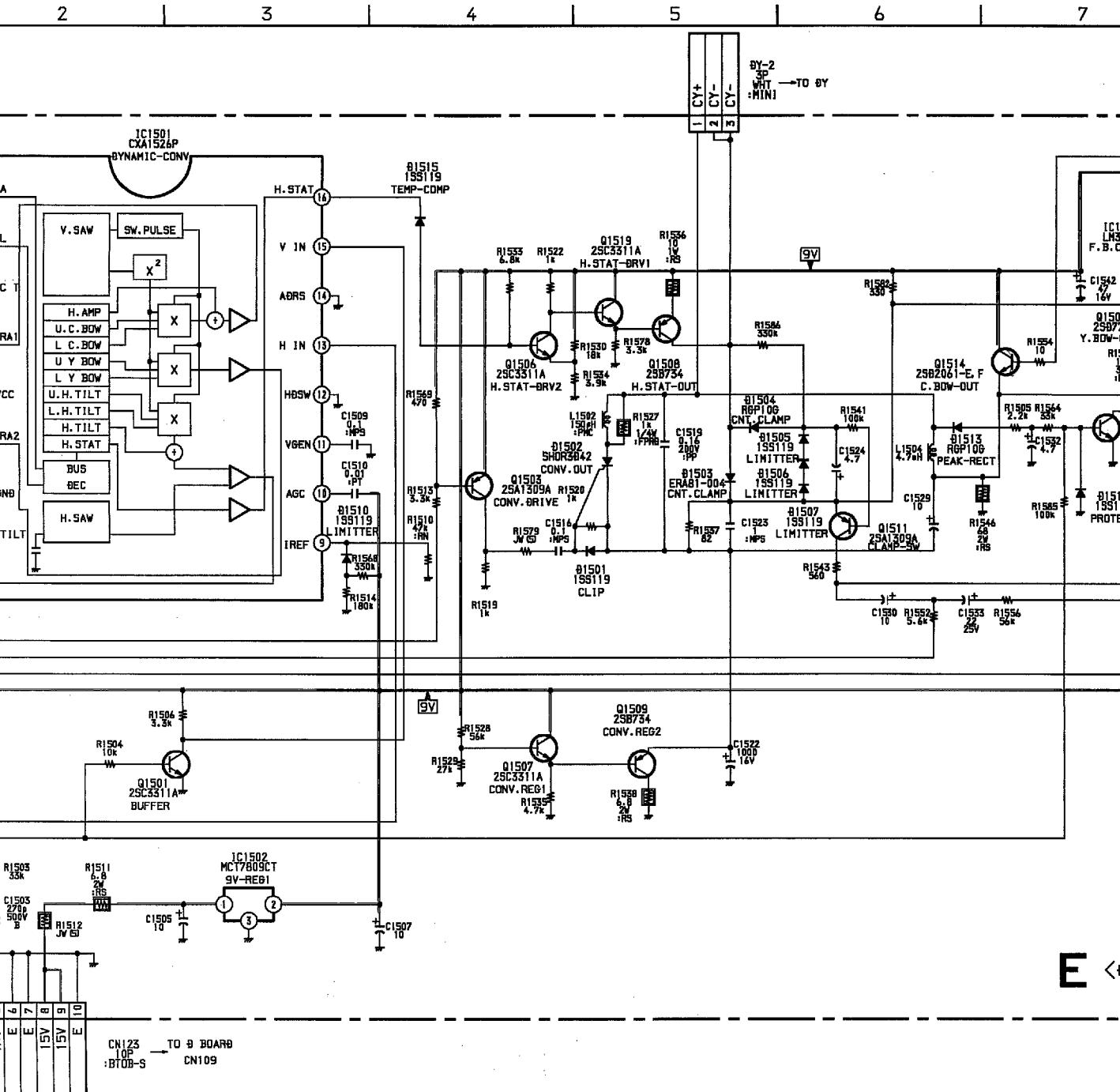
1000 1000 1000 1000 1000 1000 1000 1000 1000 1000

□ |

L	TAGE
4.6	
4.6	
0.2	
4.6	
4.8	

are in V

I



ice

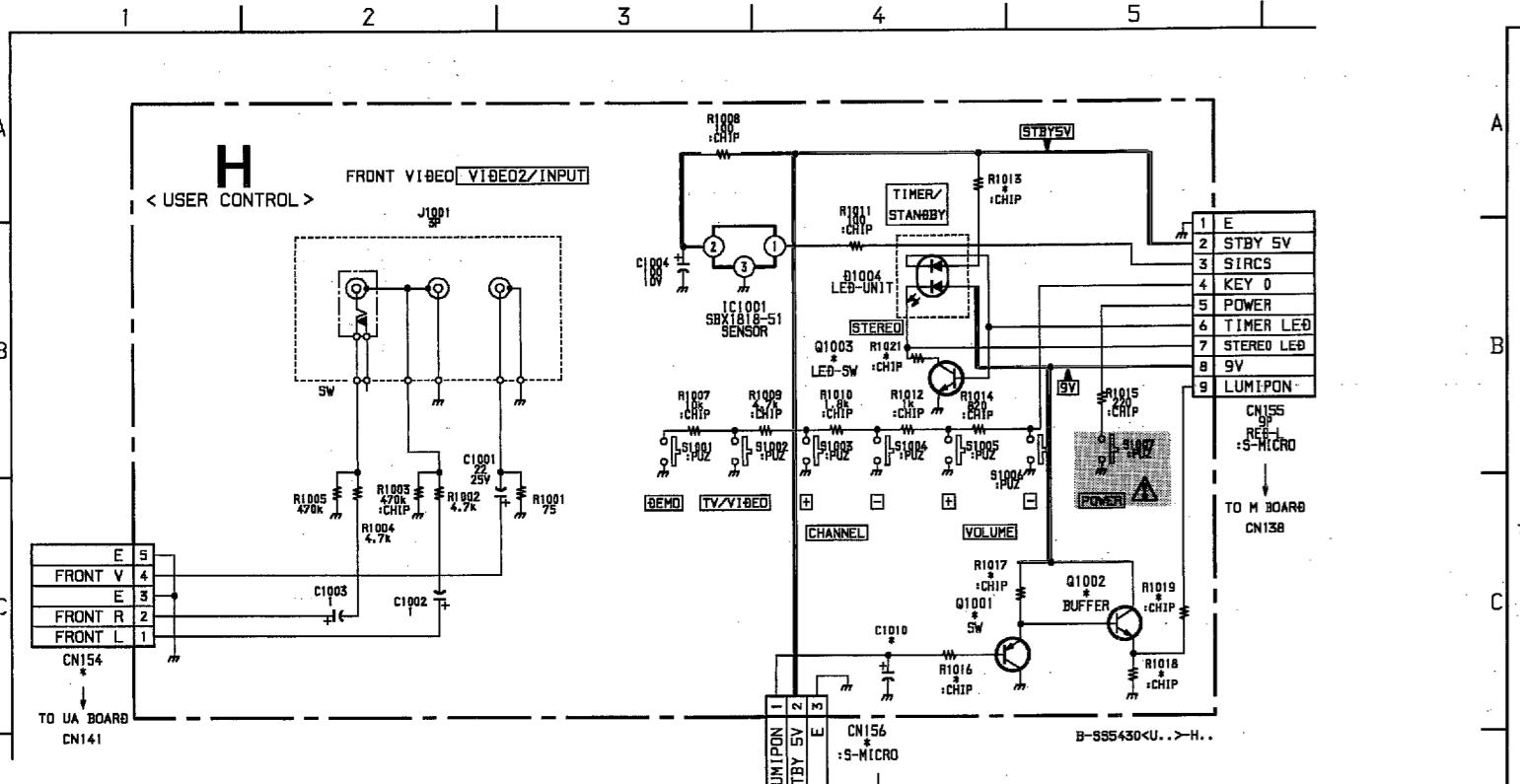
E BOARD IC VOLTAGE

All vol

E BOARD TRANSISTOR VOLTAGE LIST

CN122 106 :BTU8-8		Ref	Location	B	C
1	CS1	Q1501	D - 3	0.1	8.1
2	CS1	Q1502	B - 7	1.4	4.2
3	CS2	Q1503	C - 4	9.0	7.7
4	CS2	Q1506	B - 4	4.1	8.8
5	CS3	Q1507	D - 4	3.0	9.0
6	CS3	Q1508	B - 5	8.1	4.5
7	CS4	Q1509	D - 5	2.4	0.5
8	CS4	Q1511	C - 6	3.8	0.8
9	HBR1	Q1514	B - 7	5.4	9.0
		Q1519	B - 5	8.8	9.0
		Q1520	C - 7	- 0.5	4.8

10 HBR2



H BOARD * MARK

Ref. No.	Location	KV-32S12/S16	KV-32TW67/68	KV-32V16
C1010	C - 4	-	-	0.47
CN156	C - 4	-	3P	3P
Q1001	C - 4	-	-	2SB709A
Q1002	C - 5	-	-	2SD601A
Q1003	B - 4	2SD601A	-	2SD601A
R1013	B - 4	-	220	-
R1016	C - 4	-	220	-
R1017	C - 4	-	-	220K
R1018	C - 5	-	-	47K
R1019	C - 5	-	-	100
R1021	B - 4	680	-	680

O: TO BE MOUNT
-: NOT MOUNT

H BOARD IC VOLTAGE LIST

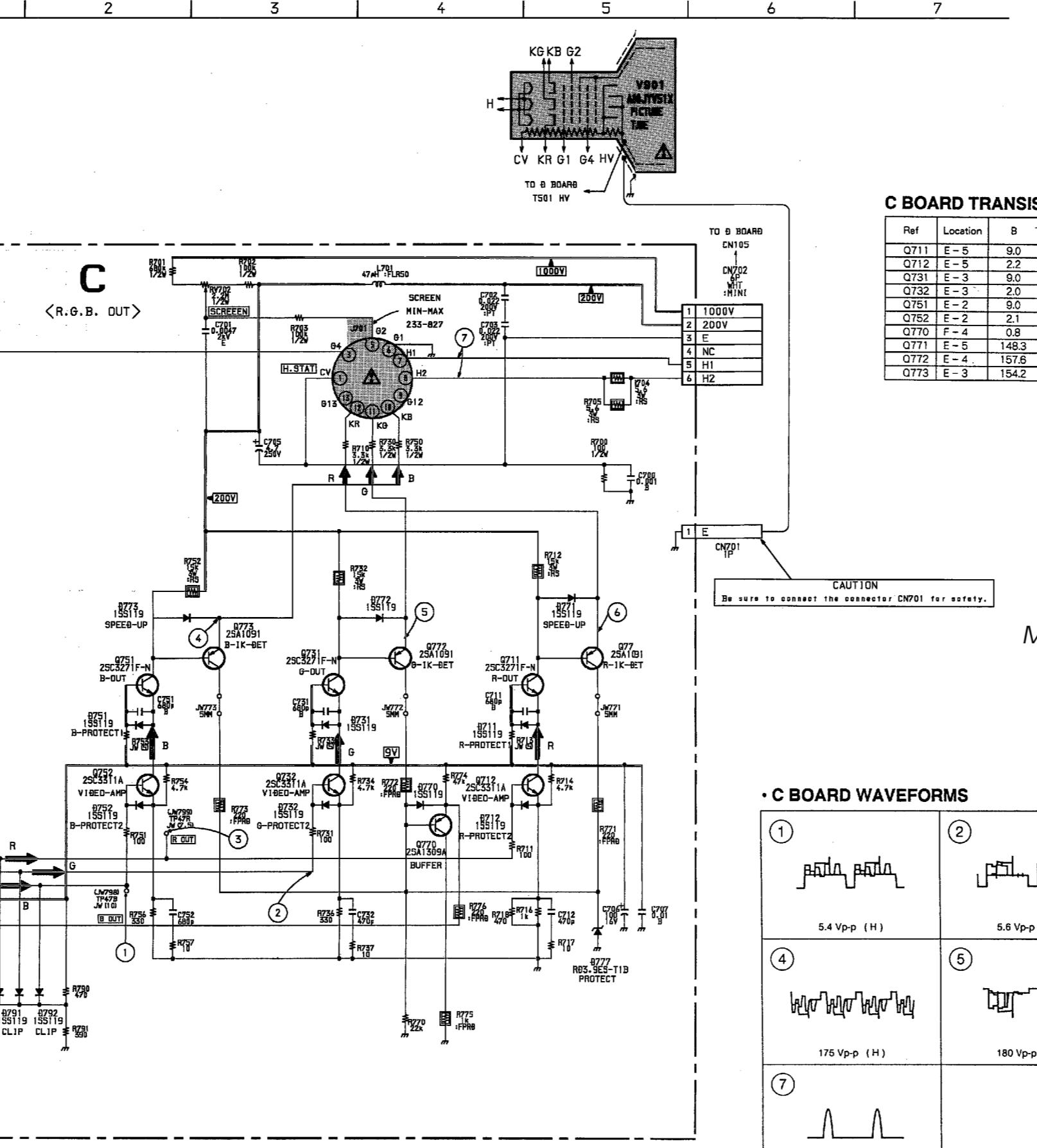
IC1001 (1)	4.8	IC1903 (1)	0
B - 3 (2)	5.0	B - 2 (2)	0
(3) 0	0	(4) 0	5.0

All voltages are in V

H BOARD TRANSISTOR VOLTAGE LIST

Ref	Location	B	C	E
Q1001	C - 5	0	0	4.5
Q1002	C - 5	4.5	8.9	5.0
Q1003	B - 4	0.1	6.9	0

All voltages are in V



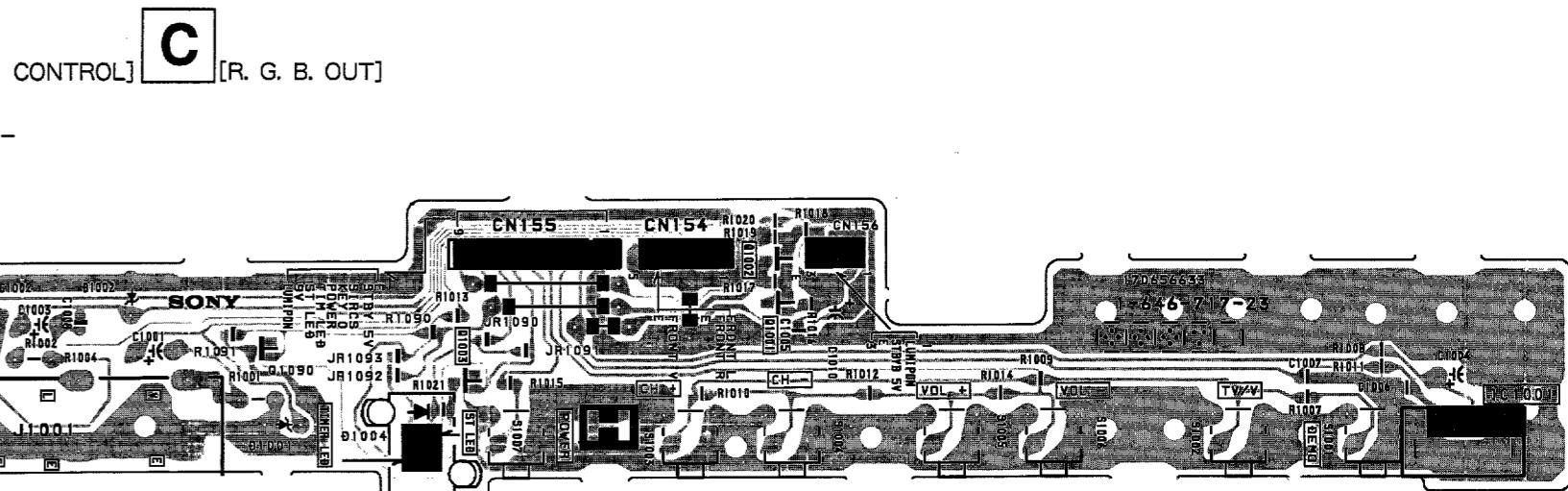
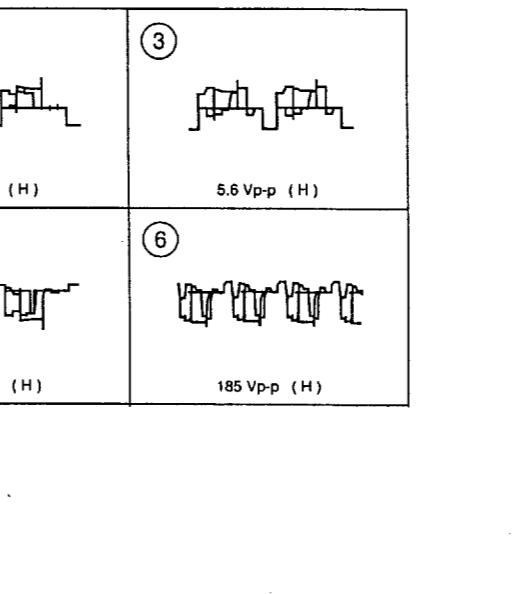
C BOARD TRANSISTOR VOLTAGE LIST

Ref	Location	B	C	E
Q711	E - 5	9.0	148.3	8.6
Q712	E - 5	2.2	8.6	1.7
Q731	E - 3	9.0	157.6	8.6
Q732	E - 3	2.0	8.6	1.6
Q751	E - 2	9.0	154.2	8.6
Q752	E - 2	2.1	8.6	1.7
Q770	F - 4	0.8	0	0.4
Q771	E - 5	148.3	0.9	145.3
Q772	E - 4	157.6	0.9	154.7
Q773	E - 3	154.2	0.9	150.8

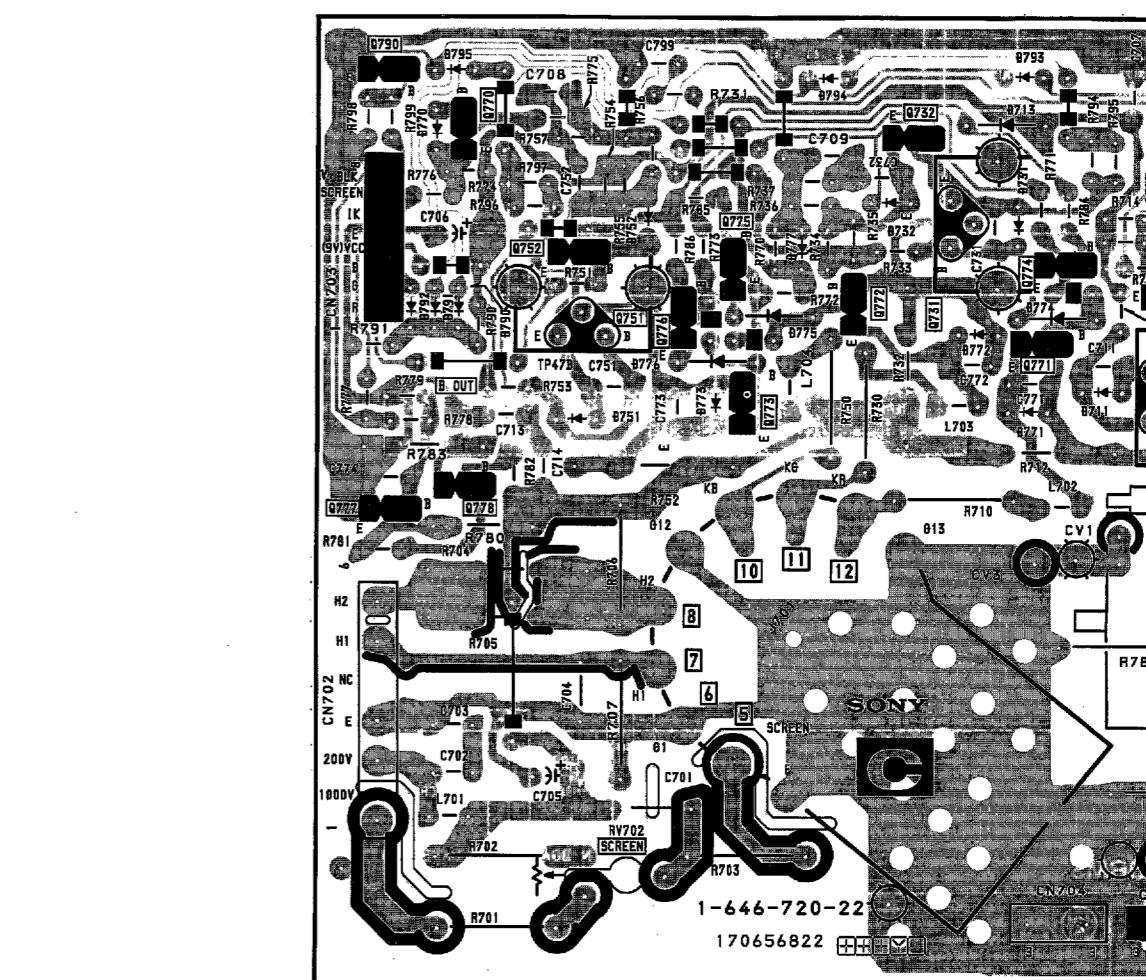
All voltages are in V

MC-Service
CAUTION
Be sure to connect the connector CN701 for safety.

C BOARD WAVEFORMS

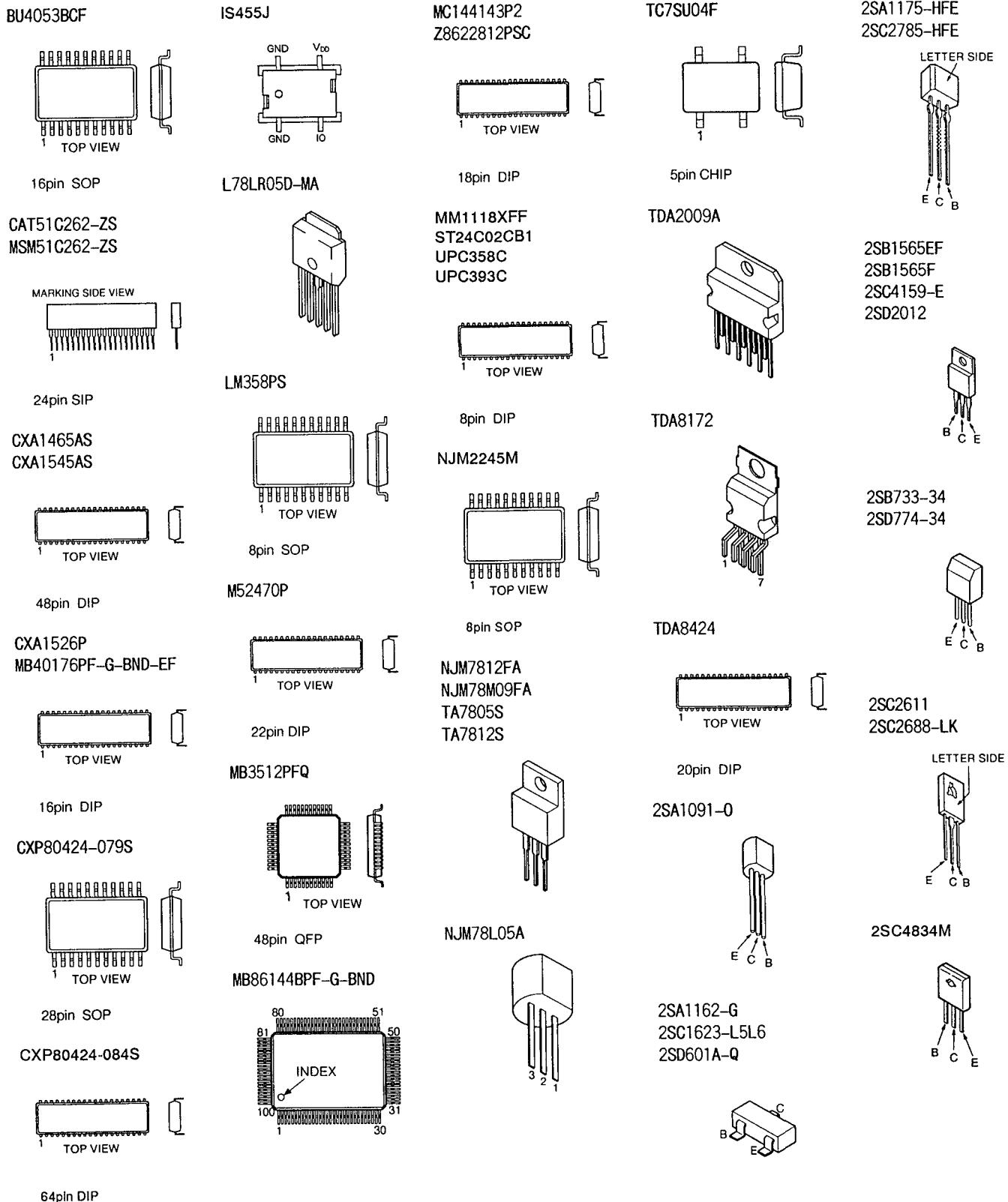


- H BOARD -

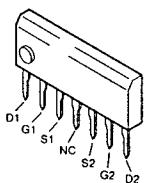


- C BOARD -

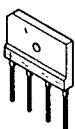
4-5. SEMICONDUCTORS



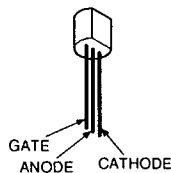
2SC4927-01



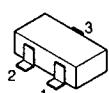
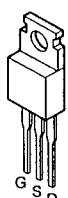
D4SB60L



SH0R3D42



2SD2394-EF



D1N20R

D1NS4

ERA83-006

ERA85-009

RD10ESB2

RD12ESB3

RD3.9ESB2

RD30ESB2

RD33ESB1

RD33ESB2

RD5.1ESB1

RD6.2ESB2

RD8.2ESB3

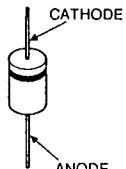
RD9.1ESL

1SS119-25

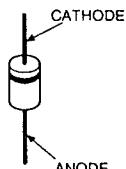
1SS133

EGP20G
EL1Z
GP08D

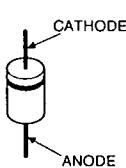
RGP02-17EL-6433



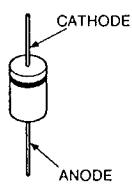
ERC06-15S
S2L20UF
S3V10SS



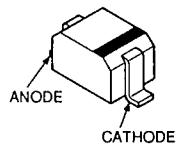
ERD29-08J



D2S4MF



HVU359TRF
MA110
1T33



SECTION 5 EXPLODED VIEWS

NOTE

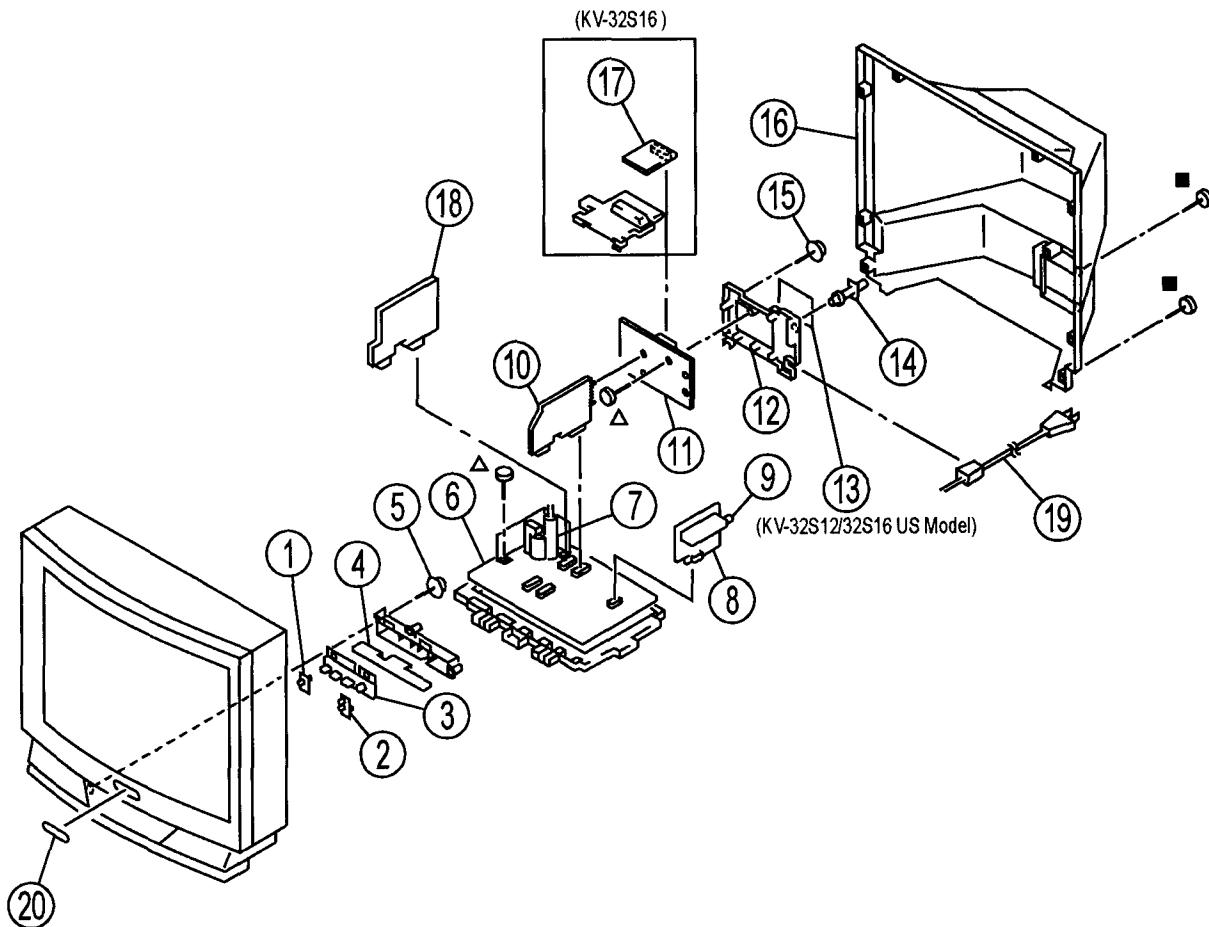
- Items with on part number and on description are not stocked because they are seldom required for routine service
- The construction parts of an assembled part are indicated with a collation number in the remark column
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items

The components identified by shading and mark Δ are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité
Ne les remplacer que par une pièce portant le numéro spécifié

5-1. CHASSIS (KV-32S12/32S16)

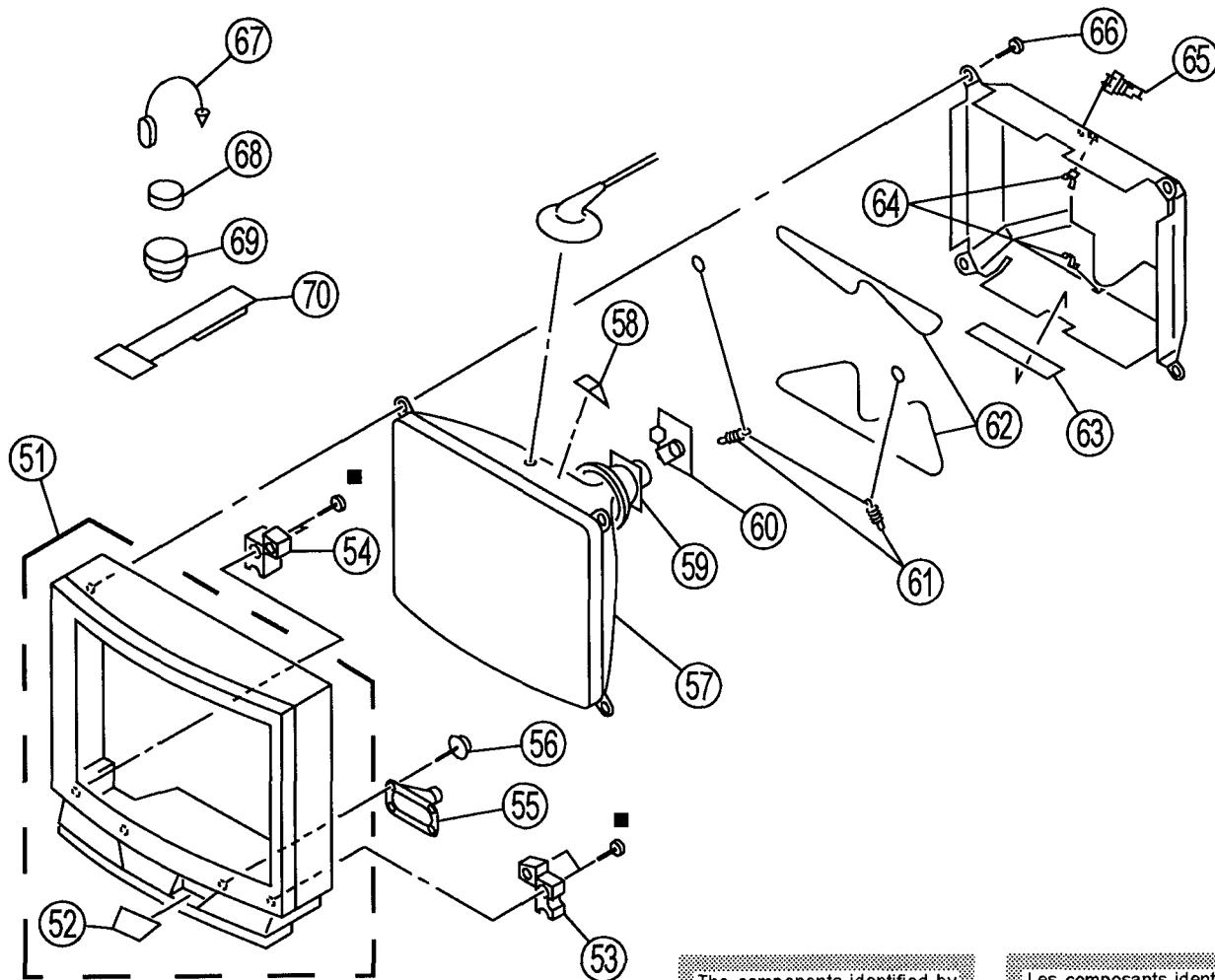
Δ +BVTP 4x12 7-685-661-14
■ +BVTP 4X16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	4-039-458-01	FILTER, REMOTE					* A-1394-544-A UA BOARD, COMPLETE (KV-32S16 Canadian model)
2	4-039-457-21	GUIDE, LED					* A-1394-676-A UA BOARD, COMPLETE (KV-32S12)
3	4-043-303-01	BUTTON, MULTI		12	4-039-524-01	PANELE, ANTENNA TERMINAL	
4	* A-1371-994-A	H BOARD, COMPLETE		13	4-039-834-01	LABEL, TERMINAL (KV-32S12/32S16 US model)	
5	4-319-520-11	SCREW, SPECIAL (+PW 4X30)		14	1-766-374-11	PULUG, F-PIN	
6	* A-1364-193-A	D BOARD, COMPLETE		15	4-382-854-11	SCREW (M3X10), P, SW (+)	
7	Δ 4-453-146-11	TRANSFORMER ASSY, FLYBACK (IX-2604A3)		16	4-039-634-11	COVER, REAR	
8	* A-1297-221-A	A BOARD, COMPLETE		17	* A-1195-062-A	P BOARD, COMPLETE (KV-32S16 US model)	
9	Δ 8-598-254-00	TUNER-BTF-WA402		18	* A-1341-622-A	E BOARD, COMPLETE	
10	* A-1306-454-A	M BOARD, COMPLETE		19	Δ 1-731-059-11	CORD, POWER (WITH CONNECTOR) 10A/125V	
11	* A-1394-527-A	UA BOARD, COMPLETE (KV-32S16 US model)		20	4-046-160-01	EMBLEM (NO 9), SONY	

5-2. PICTURE TUBE (KV-32S12/32S16)

■ BVTP 4x16 7-685-663-79



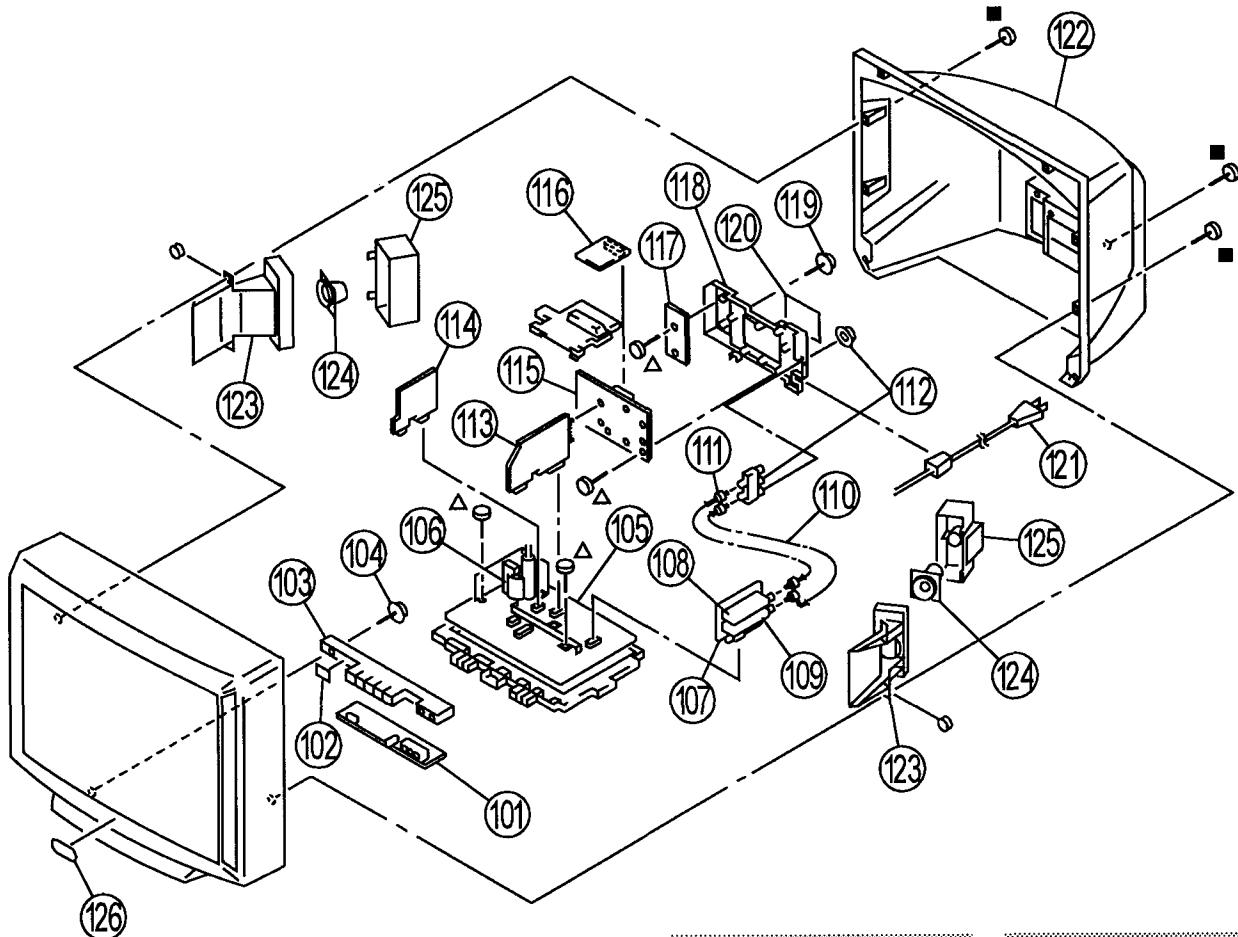
The components identified by shading and mark Δ are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité Ne les remplacer que par une pièce portant le numéro spécifié

REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
51	X-4031-657-1	BEZET ASSY		52	4-063-329-01	SPRING (B), TENSION	
52	4-043-222-01	LID, CONTROL		61	4-042-952-11	COIL, DEMAGNETIZATION	
53	* 4-031-428-11	SUPPORT (RIGHT) (PICTURE TUBE)		62	* 4-031-698-01	SHET, ADHESIVE	
54	* 4-031-430-11	SUPPORT (LEFT) (PICTURE TUBE)		63	4-371-629-01	STOPPER, WIRE	
55	1-504-531-11	SPEAKER (13 1X6 2CM)		64	4-033-681-01	HOLDER, LEAD	
56	4-388-477-01	SCREW (3X16), TAPPING +BV WASHER		65	4-041-268-01	SCREW (7), TAPPING	
57	Δ 8-733-739-01	PICTURE TUBE (A30JY/51X)		66	4-308-870-00	CLIP, LEAD WIRE	
58	4-041-361-01	SPACER, DY		67	1-452-032-00	MAGNET, DISC, 10MMØ	
59	Δ 8-451-315-41	DEFLECTION YOKE Y34FXA (VTM)		68	1-452-094-00	MAGNET, ROTATABLE DISK, 15MMØ	
60	* A-1331-351-A	C BOARD, COMPLETE		69	X-4306-312-0	PERMALLOY AASY, CONVERGENCE	
				70			

5-3. CHASSIS (KV-32V16)

△ +BVTP 4x12 7-685-661-14
 ■ +BVTP4X16 7-685-663-79

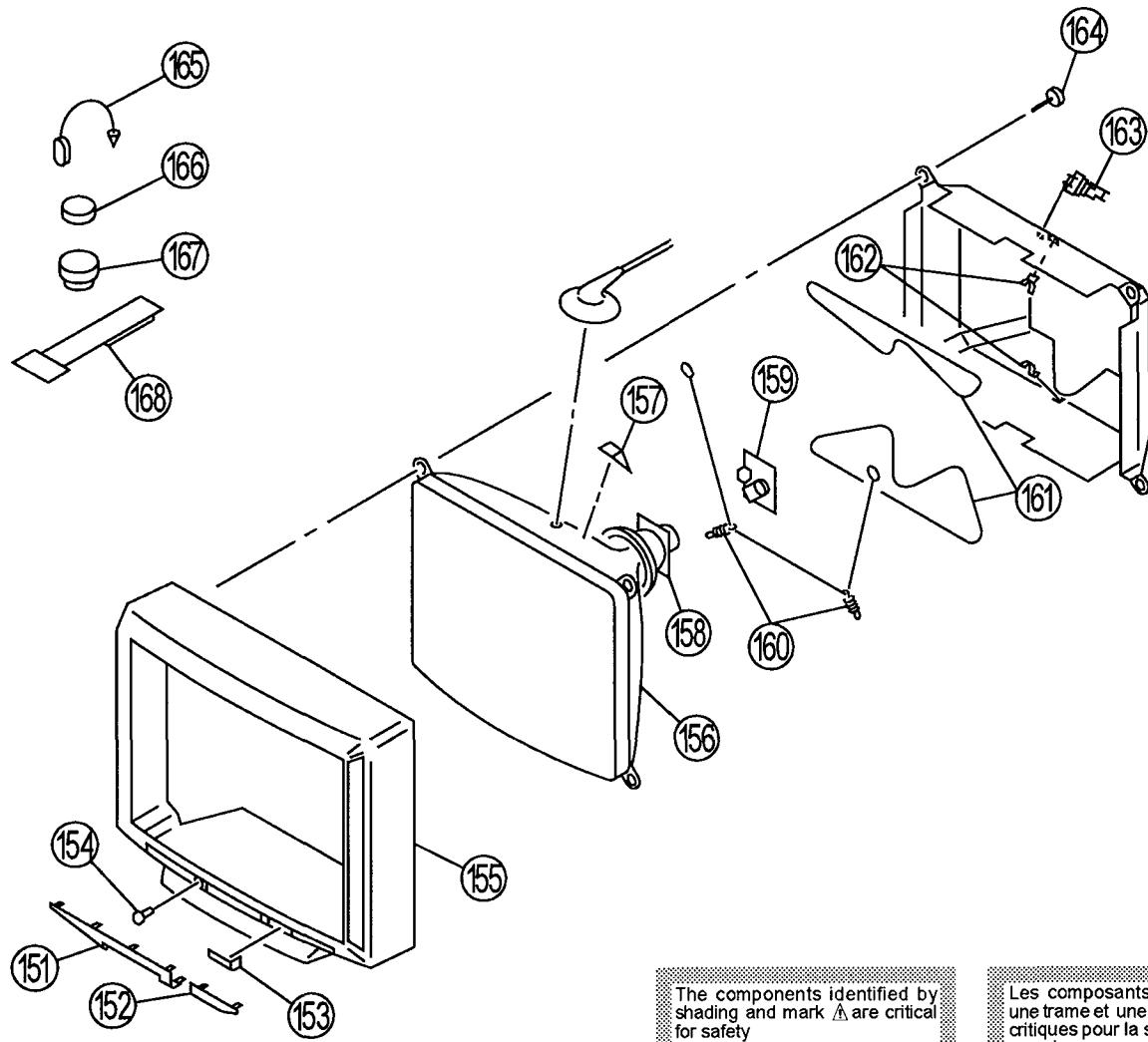


The components identified by shading and mark △ are critical for safety.
 Replace only with part number specified

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié

REF. NO	PART NO.	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
101	* A-1371-998-A	H BOARD, COMPLETE		114	* A-1341-622-A	E BOARD, COMPLETE	
102	* A-1390-410-A	L BOARD, COMPLETE		115	* A-1394-529-A	UA BOARD, COMPLETE	
103	4-043-580-01	BUTTON, MULTI		116	* A-1195-062-A	P BOARD, COMPLETE	
104	4-319-520-11	SCREW, SPECIAL (+PW4X30)		117	A-1390-411-A	Z BOARD, COMPLETE	
105	* A-1346-201-A	D BOARD, COMPLETE		118	4-039-517-11	PANEL, ANTENNA TERMINAL	
106	△ 1-463-146-11	TRANSFORMER ASSY, FLYBACK (INX-2604A3)		119	4-382-854-11	CCREW (M3X10), P, SW (+)	
107	* A-1297-233-A	A BOARD, COMPLETE		120	4-039-834-01	LABEL, TERNINAL	
108	△ 8-598-254-00	TUNER BTF-WA402		121	△ 1-751-059-11	CORD, POWER (WITH CONNECTOR) 10A/125V	
109	△ 8-598-047-11	TUNER ET BTF-LA401		122	4-043-579-01	COVER, REAR	
110	* 1-751-136-11	CAGLE, PIN		123	4-043-457-01	BAFFLE, SPEAKER	
111	* 1-751-135-11	CABLE, PIN		124	1-504-524-11	SPEAKER (8CM)	
112	1-417-178-11	SELECTOR, ANTENNA (AS-2)		125	X-4032-226-1	COVER ASSY, SPEAKER	
113	* A-1306-454-A	M BOARD, COMPLETE		126	4-046-160-01	EMBLEM (NO 9) SONY	

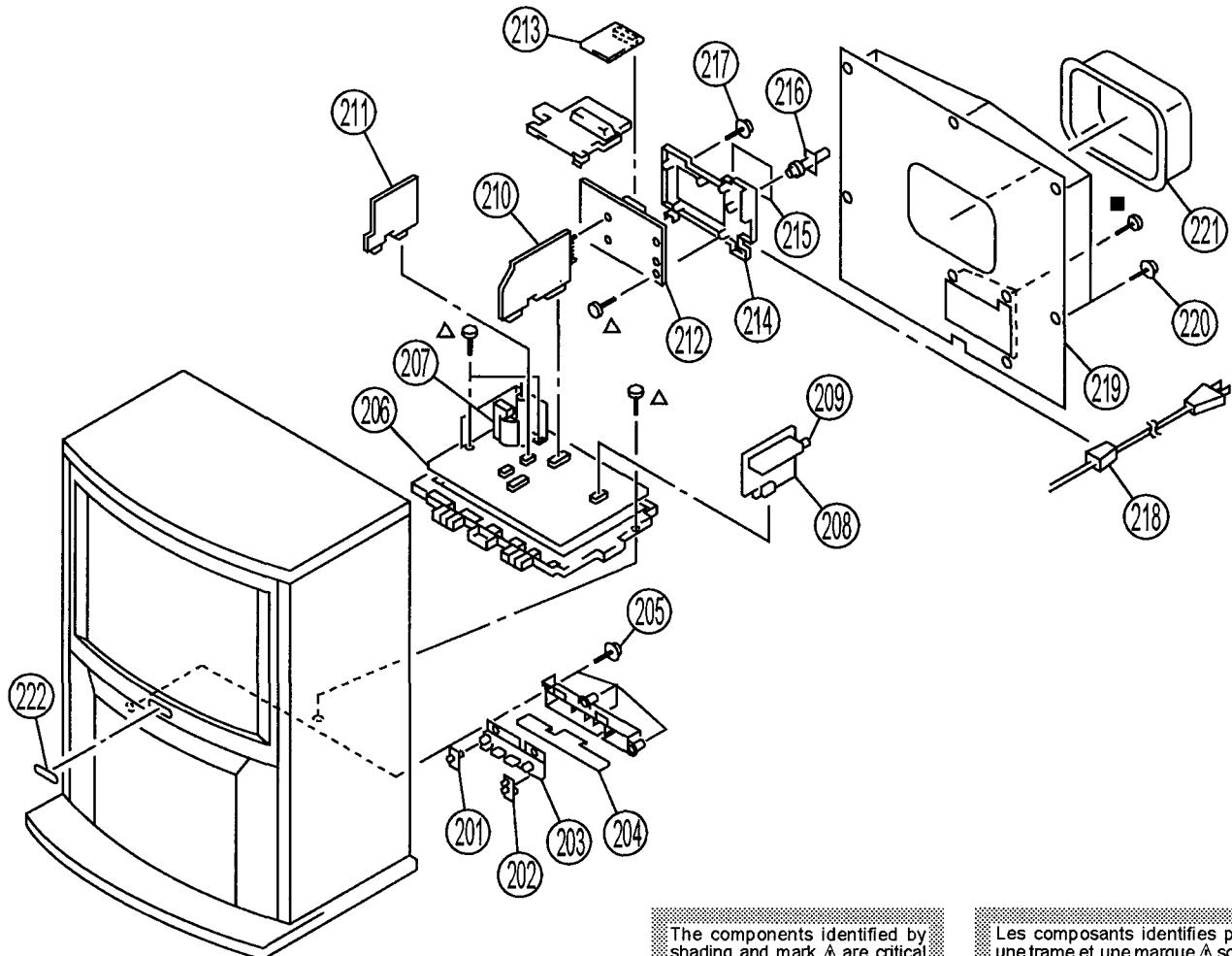
5-4. PICTURE TUBE (KV-32V16)



REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
151	4-043-659-01	PANEL (LEFT), CONTROL		161	A 1-402-952-11	COIL, DEMAGNETIZATION	
152	4-043-658-01	PANEL (RIGHT), CONTROL		162	* 4-371-629-01	STOPPER, WIRE	
153	4-043-433-21	DOOR, CONTROL		163	4-033-681-01	HOLDER, LERD	
154	* 4-389-517-01	GUIDE (R), LIGHT		164	4-041-268-01	SCREW (7), TAPPING	
155	4-043-578-01	BEZNET		165	4-308-870-00	CLIP, LEAD WIRE	
156	A 8-733-739-05	PICTURE TUBE (A80JYV51X)		166	1-452-032-00	MAGNET, DISK, 10MMØ	
157	4-041-361-01	SPACER, DY		167	1-452-094-00	MAGNET, ROTATBLE DISK, 15MMØ	
158	A 8-461-315-41	DEFLECTION YOKE Y34FXA (VTM)		168	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
159	* A-1331-351-A	C BOARD, COMPLETE					
160	4-036-329-01	SPRING (B), TENSION					

5-5. CHASSIS (KV-32TW67/32TW68)

△ +BVTP 4x12 7-685-661-14
 ■ +BVTP 4x16 7-685-663-79



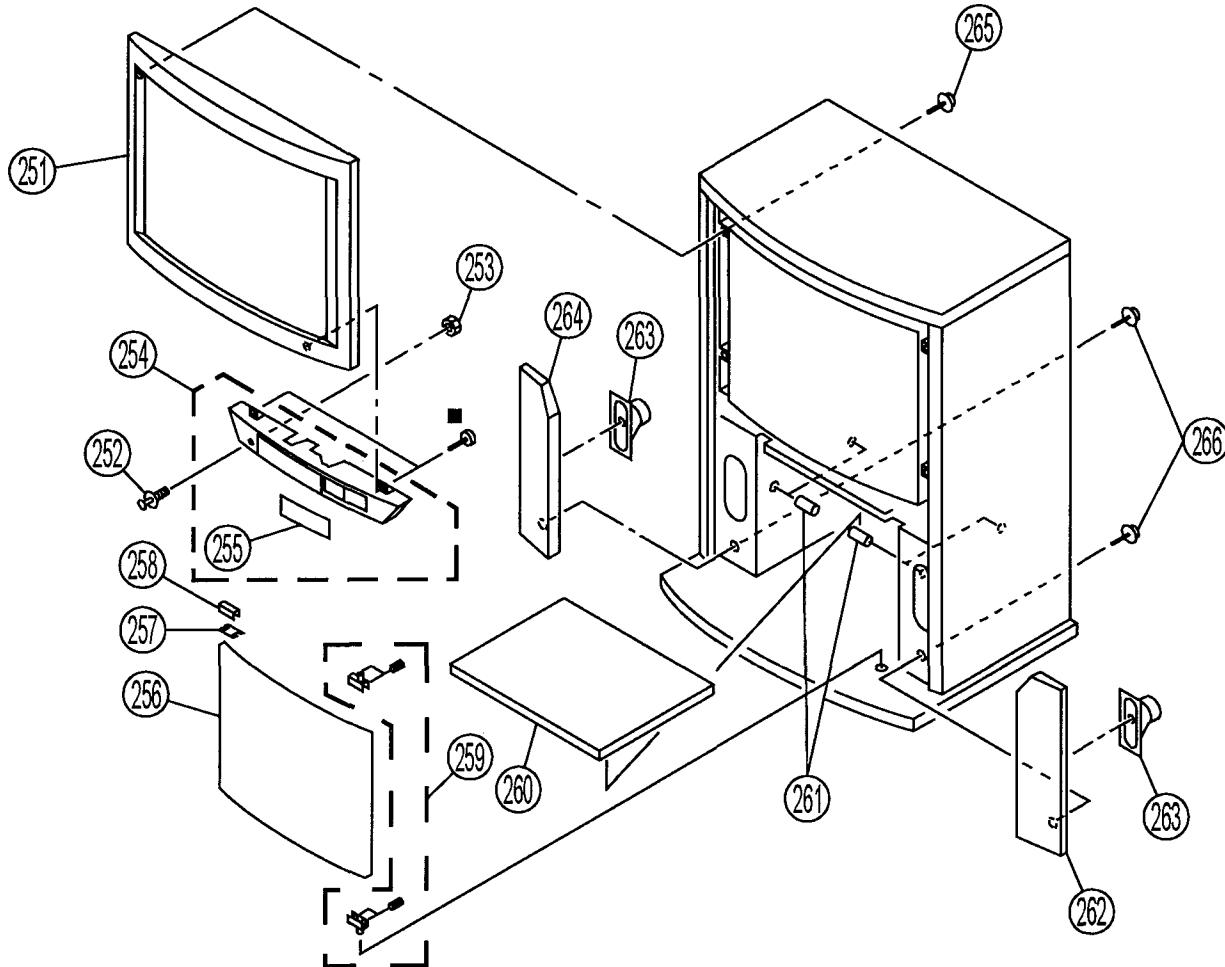
The components identified by shading and mark △ are critical for safety.
 Replace only with part number specified

Les composants identifiés par une trame et une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié

REF. NO	PART NO.	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
201	4-040-393-01	FILTER, REMOTE		212	* A-1394-415-A	UA BOARD, COMPLETE	
202	4-040-394-01	GUIDE, LED		213	* A-1195-062-A	P BOARD, COMPLETE	
203	4-040-401-01	HOLDER, CHASSIS		214	4-039-524-01	PANEL, ANTENNA TERMINAL	
204	* A-1372-020-A	H BOARD, COMPLETE		215	4-039-834-01	LABEL, TERMINAL	
205	4-319-520-11	SCREW, SPECIAL (+PW4X30)		216	1-766-374-11	PLUG, F-PIN	
206	* A-1346-193-A	D BOARD, COMPLETE		217	4-382-854-11	SCREW (M3X10) P. SW (+)	
207	△ 1-453-146-11	TRANSFORMER ASSY, FLYBACK (NX-2604A3)		218	△ 1-751-059-11	CORD, POWER (WITH CONNECTOR) 10A/125V	
208	* A-1297-432-A	A BOARD, COMPLETE		219	4-040-523-01	BOARD, REAR	
209	△ 8-598-254-00	TUNER BTF-WA402		220	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD	
210	* A-1306-470-A	M BOARD, COMPLETE		221	4-032-338-11	COVER, NECK	
211	* A-1341-622-A	E BOARD, COMPLETE		222	3-704-179-01	EMBLEM (NO 9) SONY	

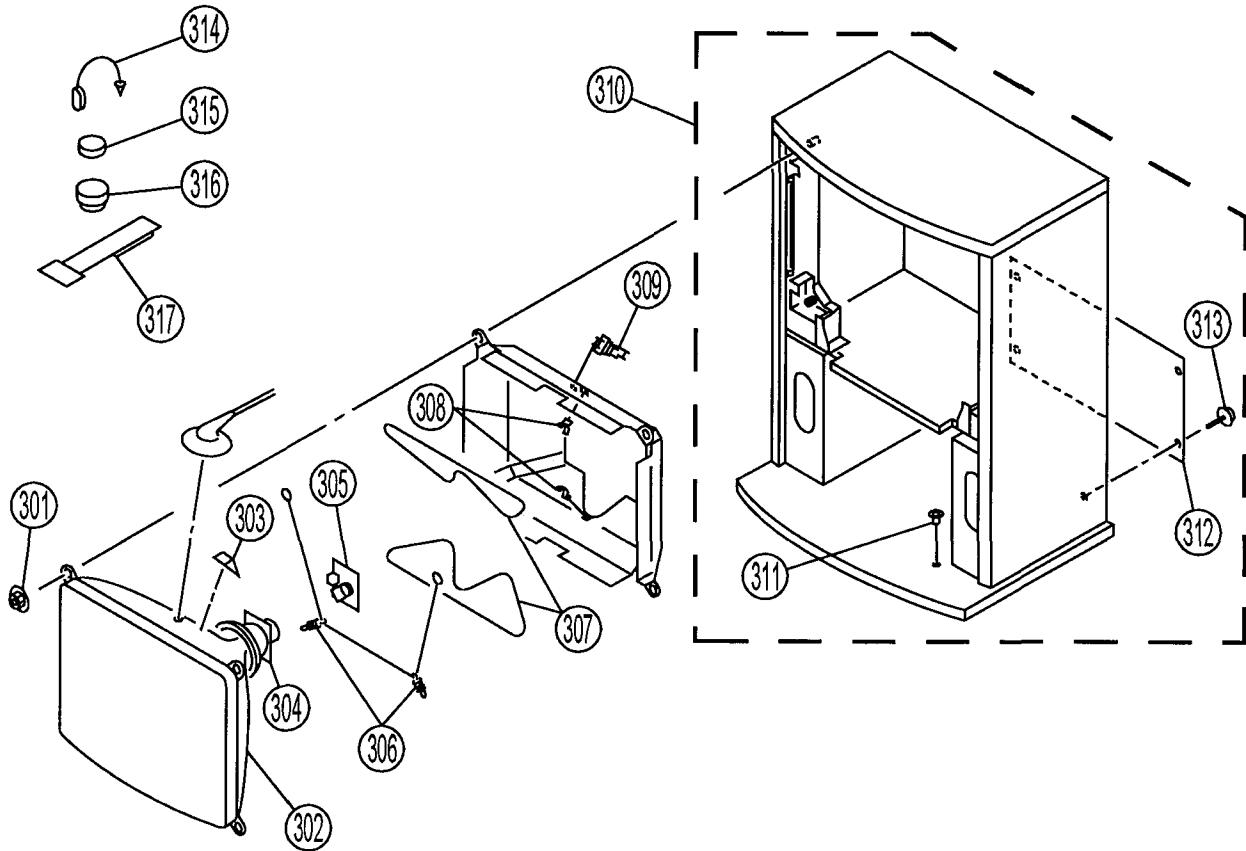
5-6. CONTROL PANEL (KV-32TW67/32TW68)

■ +BVTP 4x16 7-685-663-79



REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
251	4-032-337-11	BEZEL		260	X-4031-139-1	PLATE ASSY, RACK	
252	4-032-322-02	MAGNET, PUSH		261	4-041-162-01	PIN, RACK	
253	4-046-172-01	NUT, HEXAGON HEAD		262	X-4031-161-1	GRILLE ASSY (RIGHT), SPEAKER	
254	X-4031-160-1	PANELASSY, CONTROL		263	1-544-549-11	SPEAKER	
255	4-040-047-01	DOOR, CONTROL	255	264	X-4031-162-1	GRILLE ASSY (LEFT), SPEAKER	
256	X-4031-138-1	DOOR ASSY, GLASS		265	4-319-520-11	SCREW, SPECIAL (+PW4X30)	
257	2-352-981-01	SPACER		266	4-384-096-01	SCREW (4X16), TAPPING, +P	
258	2-359-505-01	RETAINER, MAGNET					
259	4-041-362-01	HINGE SET					

5-7. PICTURE TUBE (KV-32TW67/32TW68)



The components identified by shading and mark Δ are critical for safety
Replace only with part number specified.

Les composants identifiés par une trame et une marque Δ sont critiques pour la sécurité Ne les remplacer que par une pièce portant le numéro spécifié.

REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
301	4-387-204-01	NUT, SPECIAL, CRT		311	2-112-350-01	BEARING	
302	Δ 8-733-739-06	PICTURE TUBE (A80JY/Y51X)		312	4-040-389-01	BOARD, LOWER	
303	4-041-361-01	SPACER, DY		313	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD	
304	Δ 8-461-315-41	DEFLECTION YOKE Y34FXA (VTM)		314	4-308-870-00	CLIP, LEAD WIRE	
305	* A-1331-351-A	C BOARD, COMPLETE		315	1-452-032-00	MAGNET, DISC, 10MM ϕ	
306	4-033-329-01	BRACKET, MAIN		316	1-452-094-00	MAGNET, ROTATABLE DISK, 15MM ϕ	
307	Δ 1-402-952-11	COIL, DEMAGNETIZATION		317	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
308	4-371-629-01	STOPPER, WIRE					
309	4-033-681-01	HOLDER, LEAD					
310	* X-4031-163-1	CABINET ASSY (KV-32TW67)	311-313				
	* X-4031-163-2	CABINET ASSY (KV-32TW68)	311-313				

A M

SECTION 6

ELECTRICAL PARTS LIST

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

Les composants identifiés par une trame et une marque A sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted

When indicating parts by reference number, please include the board name

CAPACITORS COILS
 • MF μ F, PF $\mu\mu$ F • MMH mH, UH μ H

- The components identified by in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

RESISTORS

- All resistors are in ohms
 - F nonflammable

REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
		* A-1297-221-A A BOARD, COMPLETE (KV-32S12/KV32S16) *****		Q173	8-729-424-02	TRANSISTOR	2SA1162-G (KV-32V16)
		* A-1297-233-A A BOARD, COMPLETE (KV-32V16) *****				<RESISTOR>	
		* A-1297-432-A A BOARD, COMPLETE (KV-32TW67/KV-32TW68) *****		R170	1-216-025-91	METAL GLAZE	100 5% 1/10W (KV-32S12/32S16/32TW67/32TW68)
		<CAPACITOR>		R173	1-216-295-91	CONDUCTOR, CHIP	(2012) (KV-32V16)
				R174	1-216-689-11	METAL GLAZE	39K 5% 1/10W
				R175	1-215-900-11	METAL OXIDE	22K 5% 2W F (KV-32V16)
				R177	1-215-900-11	METAL OXIDE	22K 5% 2W F
C173	1-164-232-11	CERAMIC CHIP	0 01MF 10% 50V	R179	1-216-065-00	METAL GLAZE	47K 5% 1/10W
C174	1-164-232-11	CERAMIC CHIP	0 01MF 10% 50V	R181	1-216-025-91	METAL GLAZE	100 5% 1/10W (KV-32V16)
C175	1-126-935-11	ELECT	470MF 20% 16V	R185	1-216-025-91	METAL GLAZE	100 5% 1/10W (KV-32V16)
C176	1-126-935-11	ELECT	470MF 20% 16V	R187	1-216-083-00	METAL GLAZE	27K 5% 1/10W
C177	1-126-964-11	ELECT	10MF 20% 50V	R188	1-216-689-11	METAL GLAZE	39K 5% 1/10W (KV-32V16)
C178	1-126-933-11	ELECT	100MF 20% 16V	R189	1-216-083-00	METAL GLAZE	27K 5% 1/10W (KV-32V16)
C179	1-128-551-11	ELECT	22MF 20% 25V	R190	1-216-065-00	METAL GLAZE	47K 5% 1/10W (KV-32V16)
C180	1-128-551-11	ELECT	22MF 20% 25V	R191	1-216-065-00	METAL GLAZE	47K 5% 1/10W (KV-32V16)
C181	1-164-161-11	CERAMIC CHIP	0 0022MF 10% 50V	R193	1-216-037-00	METAL GLAZE	330 5% 1/10W (KV-32S12/32S16/32V16)
C182	1-164-161-11	CERAMIC CHIP	0 0022MF 10% 50V	R196	1-216-037-00	METAL GLAZE	330 5% 1/10W (KV-32V16)
C184	1-126-964-11	ELECT	10MF 20% 50V				
C185	1-126-964-11	ELECT	10MF 20% 50V				
		<CONNECTOR>				<TUNER>	
CN103	* 1-564-519-11	PLUG, CONNECTOR 4P		TU101	4-8-598-254-00	TUNER BTF-WA402	
CN151	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P		TU102	4-8-598-047-11	TUNER ET-BTF-LA401 (KV-32V16)	
CN152	1-766-774-11	CONNECTOR, BOARD TO BOARD 32P					
CN164	1-564-505-11	PLUG, CONNECTOR 2P					
CN165	1-564-505-11	PLUG, CONNECTOR 2P					
		<DIODE>					
D170	8-719-113-92	DIODE RD33ES-B1					
D175	8-719-113-92	DIODE RD33ES-B1 (KV-32V16)					
		<IC>					
IC172	8-759-932-67	IC BU4053BCF (KV-32V16)					
		<COIL>					
L170	1-408-408-00	INDUCTOR 8 2UH		C002	1-163-809-11	CERAMIC CHIP	0 047MF 10% 25V
L171	1-408-408-00	INDUCTOR 8 2UH		C003	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
L172	1-408-408-00	INDUCTOR 8 2UH		C005	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
L173	1-408-408-00	INDUCTOR 8 2UH (KV-32V16)		C006	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
		<TRANSISTOR>		C007	1-124-903-11	ELECT	1MF 20% 50V
Q172	8-729-424-02	TRANSISTOR	2SA1162-G (KV-32V16)	C008	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C009	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C010	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C012	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C013	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C014	1-163-001-11	CERAMIC CHIP	220PF 10% 50V
				C015	1-163-001-11	CERAMIC CHIP	220PF 10% 50V



REF. NO	PART NO.	DESCRIPTION		REMARK	REF. NO	PART NO	DESCRIPTION		REMARK
C016	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C301	1-163-117-00	CERAMIC CHIP	100PF	5% 50V
C017	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C305	1-126-964-11	ELECT	10MF	20% 50V
C018	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C306	1-124-902-00	ELECT	047MF	20% 50V
C019	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C307	1-163-125-00	CERAMIC CHIP	220PF	5% 50V
C021	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C308	1-163-099-00	CERAMIC CHIP	18PF	5% 50V
C022	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C310	1-128-551-11	ELECT	22MF	20% 25V
C023	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C311	1-124-903-11	ELECT	1MF	20% 50V
C025	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C313	1-163-003-11	CERAMIC CHIP	330PF	10% 50V
C028	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C315	1-126-964-11	ELECT	10MF	20% 50V
C029	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C316	1-126-964-11	ELECT	10MF	20% 50V
C032	1-124-902-00	ELECT	047MF	20% 50V	C317	1-126-964-11	ELECT	10MF	20% 50V
C033	1-126-933-11	ELECT	100MF	20% 10V	C318	1-136-165-00	FILM	01MF	5% 50V
C034	1-163-001-11	CERAMIC CHIP	220PF	10% 50V (KV-32S12/32S16/32V16)	C319	1-136-165-00	FILM	01MF	5% 50V
C035	1-163-001-11	CERAMIC CHIP	220PF	10% 50V (KV-32S12/32S16/32V16)	C320	1-136-165-00	FILM	01MF	5% 50V
C041	1-163-009-11	CERAMIC CHIP	0001MF	10% 50V	C321	1-126-952-11	ELECT	1000MF	20% 16V
C043	1-163-159-00	CERAMIC CHIP	12PF	20% 50V (KV-32TW67/32TW68)	C322	1-136-153-00	FILM	001MF	5% 50V
C045	1-126-940-11	ELECT	330MF	20% 16V	C323	1-126-923-11	ELECT	220MF	20% 10V
C047	1-104-896-11	CERAMIC CHIP	24PF	20% 50V (KV-32TW67/32TW68)	C324	1-163-003-11	CERAMIC CHIP	330PF	10% 50V
C048	1-126-964-11	ELECT	10MF	20% 50V	C325	1-163-037-11	CERAMIC CHIP	0022MF	10% 25V
C049	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C326	1-136-169-00	FILM	022MF	5% 50V
C050	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C327	1-136-169-00	FILM	022MF	5% 50V
C051	1-163-031-11	CERAMIC CHIP	001MF	50V	C328	1-124-902-00	ELECT	047MF	20% 50V
C052	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C329	1-124-903-11	ELECT	1MF	20% 50V
C053	1-163-121-00	CERAMIC CHIP	150PF	5% 50V	C330	1-126-964-11	ELECT	10MF	20% 50V
C054	1-163-125-00	CERAMIC CHIP	220PF	5% 50V	C332	1-164-489-11	CERAMIC CHIP	022MF	10% 16V
C055	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C333	1-163-011-11	CERAMIC CHIP	00015MF	10% 50V
C056	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C334	1-124-902-00	ELECT	047MF	20% 50V
C057	1-163-017-00	CERAMIC CHIP	00047MF	10% 50V	C335	1-163-001-11	CERAMIC CHIP	220PF	10% 50V
C058	1-163-037-11	CERAMIC CHIP	0022MF	10% 25V	C336	1-124-903-11	ELECT	1MF	20% 50V
C059	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	C337	1-124-902-00	ELECT	047MF	20% 50V
C060	1-124-903-11	ELECT	1MF	20% 50V	C338	1-136-153-00	FILM	001MF	5% 50V
C061	1-163-117-00	CERAMIC CHIP	100PF	5% 50V (KV-32TW67/32TW68)	C340	1-163-005-11	CERAMIC CHIP	470PF	10% 50V
C062	1-126-964-11	ELECT	10MF	20% 50V	C342	1-106-359-00	MYLAR	00047MF	10% 100V
<CONNECTOR>									
C150	1-136-165-00	FILM	01MF	5% 50V	CN129	* 1-564-521-11	PLUG, CONNECTOR 6P		
C151	1-136-495-11	FILM	0068MF	5% 50V	CN130	1-573-301-21	CONNECTOR, BOARD TO BOARD 20P		
C152	1-126-964-11	ELECT	10MF	20% 50V	CN131	* 1-691-914-11	CONNECTOR, BOARD TO BOARD 15P		
C153	1-137-367-11	FILM	00033MF	5% 50V	CN134	* 1-564-521-11	PLUG, CONNECTOR 6P (KV-32S12/32S16/32V16)		
C154	1-163-038-91	CERAMIC CHIP	01MF	25V	CN137	1-750-394-11	PIN, CONNECTOR (STAKING) 32P		
C155	1-126-964-11	ELECT	10MF	20% 50V	CN138	* 1-564-512-11	PLUG, CONNECTOR 9P		
C156	1-163-135-00	CERAMIC CHIP	560PF	5% 50V	CN163	* 1-564-508-11	PLUG, CONNECTOR 5P (KV-32S12/32S16/32V16)		
C157	1-163-038-91	CERAMIC CHIP	01MF	25V	CN168	1-564-505-11	PLUG, CONNECTOR 2P		
C158	1-124-903-11	ELECT	1MF	20% 50V	<DIODE>				
C160	1-124-903-11	ELECT	1MF	20% 50V	D001	8-719-404-46	DIODE MA110		
C201	1-163-017-00	CERAMIC CHIP	00047MF	10% 50V	D002	8-719-404-46	DIODE MA110		
C202	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	D004	8-719-404-46	DIODE MA110		
C203	1-163-989-11	CERAMIC CHIP	0033MF	10% 25V	D005	8-713-300-57	DIODE 1T33		
C204	1-126-933-11	ELECT	100MF	20% 16V	D006	8-719-110-17	DIODE RD10ESB2		
C205	1-163-001-11	CERAMIC CHIP	220PF	10% 50V	D007	8-719-110-17	DIODE RD10ESB2		
C211	1-163-989-11	CERAMIC CHIP	0033MF	10% 25V	D008	8-719-110-17	DIODE RD10ESB2		
C212	1-124-902-00	ELECT	047MF	20% 50V	D009	8-719-110-17	DIODE RD10ESB2		
C213	1-124-902-00	ELECT	047MF	20% 50V	D150	8-719-404-46	DIODE MA110		
C214	1-163-017-00	CERAMIC CHIP	00047MF	10% 50V	D201	8-719-404-46	DIODE MA110		
C216	1-104-665-11	ELECT	100MF	20% 25V					

M

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D202	8-719-404-46	DIODE MA110		R018	1-216-033-00	METAL GLAZE	220 5% 1/10W
D205	8-719-110-17	DIODE RD10ESB2		R019	1-216-033-00	METAL GLAZE	220 5% 1/10W
D206	8-719-110-17	DIODE RD10ESB2		R020	1-216-033-00	METAL GLAZE	220 5% 1/10W
D301	8-719-110-17	DIODE RD10ESB2		R021	1-216-073-00	METAL GLAZE	10K 5% 1/10W
D304	8-719-110-17	DIODE RD10ESB2		R022	1-216-073-00	METAL GLAZE	10K 5% 1/10W
D308	8-719-110-17	DIODE RD10ESB2		R023	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R025	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R026	1-216-097-00	METAL GLAZE	100K 5% 1/10W
			<IC>	R027	1-216-121-00	METAL GLAZE	1M 5% 1/10W
IC101	8-752-851-01	IC CXP80424-079S (KV-32S12/32S16/32V16)		R028	1-216-073-00	METAL GLAZE	10K 5% 1/10W
IC101	8-752-856-00	IC CXP80424-084S (KV-32TW67/32TW68)		R029	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
IC102	8-759-280-74	IC ST24C02CB1		R030	1-216-073-00	METAL GLAZE	10K 5% 1/10W
IC103	8-759-805-37	IC L78LR05D-MA		R031	1-216-033-00	METAL GLAZE	220 5% 1/10W
IC150	8-759-328-12	IC Z8622812PSC		R032	1-216-033-00	METAL GLAZE	220 5% 1/10W
IC201	8-759-090-21	IC TDA8424		R033	1-216-033-00	METAL GLAZE	220 5% 1/10W
IC202	8-759-983-69	IC LM358PS		R034	1-216-033-00	METAL GLAZE	220 5% 1/10W
IC301	8-752-059-67	IC CXA1465AS		R035	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R036	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R037	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R038	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R039	1-216-295-91	CONDUCTOR, CHIP	(2012)
JR200	1-216-295-91	CONDUCTOR, CHIP	(2012)	R040	1-216-049-91	METAL GLAZE	1K 5% 1/10W
JR201	1-216-295-91	CONDUCTOR, CHIP	(2012)	R041	1-216-033-00	METAL GLAZE	220 5% 1/10W
JR202	1-216-295-91	CONDUCTOR, CHIP	(2012)	R042	1-216-049-91	METAL GLAZE	1K 5% 1/10W
JR205	1-216-295-91	CONDUCTOR, CHIP	(2012)	R043	1-216-049-91	METAL GLAZE	1K 5% 1/10W
				R044	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R045	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R046	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
L001	1-410-470-11	INDUCTOR 10UH		R047	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
L002	1-408-414-00	INDUCTOR 27UH					(KV-32TW67/32TW68)
				R048	1-216-073-00	METAL GLAZE	10K 5% 1/10W
				R049	1-216-049-91	METAL GLAZE	1K 5% 1/10W
				R050	1-216-049-91	METAL GLAZE	1K 5% 1/10W
Q001	8-729-216-22	TRANSISTOR	2SA1162-G	R051	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q002	8-729-216-22	TRANSISTOR	2SA1162-G (KV-32TW67/32TW68)	R052	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q004	8-729-216-22	TRANSISTOR	2SA1162-G	R053	1-216-049-91	METAL GLAZE	1K 5% 1/10W
Q005	8-729-422-27	TRANSISTOR	2SD601A-Q	R054	1-216-049-91	METAL GLAZE	1K 5% 1/10W
Q151	8-729-422-27	TRANSISTOR	2SD601A-Q	R055	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q201	8-729-422-27	TRANSISTOR	2SD601A-Q				(KV-32S12/32S16/32V16)
Q301	8-729-216-22	TRANSISTOR	2SA1162-G	R056	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q302	8-729-216-22	TRANSISTOR	2SA1162-G	R057	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
Q308	8-729-422-27	TRANSISTOR	2SD601A-Q	R058	1-216-073-00	METAL GLAZE	10K 5% 1/10W
				R059	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
				R060	1-216-079-00	METAL GLAZE	18K 5% 1/10W
				R062	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R002	1-216-073-00	METAL GLAZE	10K	R063	1-216-033-00	METAL GLAZE	220 5% 1/10W
R003	1-216-033-00	METAL GLAZE	220				(KV-32S12/32S16/32V16)
R004	1-216-033-00	METAL GLAZE	220	R064	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R005	1-216-033-00	METAL GLAZE	220	R065	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R006	1-216-049-91	METAL GLAZE	1K	R066	1-216-025-91	METAL GLAZE	100 5% 1/10W
R007	1-216-033-00	METAL GLAZE	220	R067	1-216-025-91	METAL GLAZE	100 5% 1/10W
R008	1-216-033-00	METAL GLAZE	220	R069	1-216-033-00	METAL GLAZE	220 5% 1/10W
R009	1-216-033-00	METAL GLAZE	220				(KV-32S12/32S16/32V16)
R011	1-216-033-00	METAL GLAZE	220	R070	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R012	1-216-033-00	METAL GLAZE	220				(KV-32S12/32S16/32V16)
R013	1-216-033-00	METAL GLAZE	220	R071	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R016	1-216-033-00	METAL GLAZE	220				(KV-32S12/32S16/32V16)
R017	1-216-033-00	METAL GLAZE	220	R074	1-216-295-91	CONDUCTOR, CHIP	(2012)

M	D
---	---

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R075	1-216-295-91	CONDUCTOR, CHIP	(2012)	R304	1-216-039-00	METAL GLAZE	390 5% 1/10W
R076	1-216-295-91	CONDUCTOR, CHIP	(2012)	R305	1-216-039-00	METAL GLAZE	390 5% 1/10W
R078	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R306	1-216-057-00	METAL GLAZE	22K 5% 1/10W
R079	1-216-295-91	CONDUCTOR, CHIP	(2012)	R312	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R080	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R313	1-216-079-00	METAL GLAZE	18K 5% 1/10W
R082	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R321	1-216-025-91	METAL GLAZE	100 5% 1/10W
R083	1-216-089-00	METAL GLAZE 47K	5% 1/10W	R323	1-216-041-00	METAL GLAZE	470 5% 1/10W
R086	1-216-089-00	METAL GLAZE 47K	5% 1/10W	R324	1-216-025-91	METAL GLAZE	100 5% 1/10W
R087	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R327	1-208-784-11	METAL CHIP	12K 0.50% 1/10W
R089	1-216-083-00	METAL GLAZE 27K	5% 1/10W (KV-32TW67/32TW68)	R328	1-216-033-00	METAL GLAZE	220 5% 1/10W
R090	1-216-073-00	METAL GLAZE 10K	5% 1/10W (KV-32TW67/32TW68)	R329	1-216-033-00	METAL GLAZE	220 5% 1/10W
R091	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R330	1-216-295-91	CONDUCTOR, CHIP	(2012)
R092	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R331	1-216-678-11	METAL CHIP	13K 0.50% 1/10W
R093	1-216-097-00	METAL GLAZE 100K	5% 1/10W (KV-32S12/32S16/32V16)	R332	1-216-057-00	METAL GLAZE	22K 5% 1/10W
R093	1-216-295-91	CONDUCTOR, CHIP	(2012) (KV-32TW67/32TW68)	R333	1-216-025-91	METAL GLAZE	100 5% 1/10W
R150	1-216-097-00	METAL GLAZE 100K	5% 1/10W	R334	1-216-687-11	METAL CHIP	33K 0.50% 1/10W
R151	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R335	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R152	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R336	1-216-295-91	CONDUCTOR, CHIP	(2012)
R153	1-216-069-00	METAL GLAZE 6.8K	5% 1/10W	R337	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R154	1-216-041-00	METAL GLAZE 470	5% 1/10W	R338	1-249-417-11	CARBON	1K 5% 1/4W F
R155	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R339	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R156	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R340	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R157	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R341	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R158	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R342	1-216-295-91	CONDUCTOR, CHIP	(2012)
R159	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R343	1-216-053-00	METAL GLAZE	15K 5% 1/10W
R160	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R344	1-216-043-91	METAL GLAZE	560 5% 1/10W
R161	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R345	1-216-109-00	METAL GLAZE	330K 5% 1/10W
R162	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R346	1-216-071-00	METAL GLAZE	82K 5% 1/10W
R163	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R347	1-249-409-11	CARBON	220 5% 1/4W F
R164	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R348	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R165	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W	R349	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R166	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R351	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R168	1-216-049-91	METAL GLAZE 1K	5% 1/10W	R352	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R201	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R354	1-216-033-00	METAL GLAZE	220 5% 1/10W
R202	1-216-073-00	METAL GLAZE 10K	5% 1/10W	R356	1-216-295-91	CONDUCTOR, CHIP	(2012)
R203	1-216-089-00	METAL GLAZE 47K	5% 1/10W	R374	1-216-033-00	METAL GLAZE	220 5% 1/10W
R204	1-216-089-00	METAL GLAZE 47K	5% 1/10W	R375	1-216-033-00	METAL GLAZE	220 5% 1/10W
R205	1-216-295-91	CONDUCTOR, CHIP	(2012)				<CRYSTAL>
R206	1-216-295-91	CONDUCTOR, CHIP	(2012)	X001	1-567-775-11	VIBRATOR, CERAMIC	
R207	1-216-085-00	METAL GLAZE 33K	5% 1/10W	X301	1-567-505-11	OSCILLATOR, CRYSTAL	
R208	1-216-089-00	METAL GLAZE 47K	5% 1/10W				*****
R209	1-216-085-00	METAL GLAZE 33K	5% 1/10W				*****
R210	1-216-089-00	METAL GLAZE 47K	5% 1/10W				*****
R211	1-216-033-00	METAL GLAZE 220	5% 1/10W				* A-1346-193-A D BOARD, COMPLETE
R212	1-216-025-91	METAL GLAZE 100	5% 1/10W				*****
R213	1-216-025-91	METAL GLAZE 100	5% 1/10W				(KV-32S12/32S16/32TW67/32TW68)
R218	1-216-073-00	METAL GLAZE 10K	5% 1/10W				* A-1346-201-A D BOARD, COMPLETE (KV-32V16)
R219	1-216-073-00	METAL GLAZE 10K	5% 1/10W				*****
R220	1-216-033-00	METAL GLAZE 220	5% 1/10W				
R222	1-216-089-00	METAL GLAZE 47K	5% 1/10W				
R223	1-216-045-00	METAL GLAZE 680	5% 1/10W				
R301	1-216-025-91	METAL GLAZE 100	5% 1/10W				
R302	1-216-049-91	METAL GLAZE 1K	5% 1/10W				
R303	1-216-065-00	METAL GLAZE 4.7K	5% 1/10W				<CAPACITOR>

* A-1346-193-A D BOARD, COMPLETE

(KV-32S12/32S16/32TW67/32TW68)

* A-1346-201-A D BOARD, COMPLETE (KV-32V16)

<CAPACITOR>

D

Les composants identifiés par une trame et une marque **▲** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **▲** are critical for safety. Replace only with part number specified.

REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
C501	1-126-942-61	ELECT	1000MF 20% 25V	C614	1-164-625-11	CERAMIC	680PF 10% 500V
C502	1-162-131-11	CERAMIC	220PF 10% 2KV	C616	1-126-964-11	ELECT	10MF 20% 50V
C503	1-126-942-61	ELECT	1000MF 20% 25V	C617	1-126-953-11	ELECT	2200MF 20% 35V
C504	1-137-366-11	FILM	0.0022MF 5% 50V	C618	1-126-942-61	ELECT	1000MF 20% 25V
C505	1-128-551-11	ELECT	22MF 20% 25V	C619	1-126-952-11	ELECT	1000MF 20% 16V
C506	1-128-560-11	ELECT	22MF 20% 100V	C620	1-164-644-11	CERAMIC	330PF 10% 500V
C509	1-128-551-11	ELECT	22MF 20% 25V	C621	1-126-356-11	ELECT	220MF 20% 160V
C510	1-106-387-00	MYLAR	0.068MF 10% 200V	C623	1-102-030-00	CERAMIC	330PF 10% 500V
C511	1-123-024-21	ELECT	33MF 160V	C624	1-136-155-00	FILM	0.015MF 5% 50V
C512	1-102-212-00	CERAMIC	820PF 10% 500V	C625	1-129-719-00	FILM	0.027MF 10% 400V
C513	1-102-212-00	CERAMIC	820PF 10% 500V	C626	1-104-665-11	ELECT	100MF 20% 25V
C514	1-102-244-00	CERAMIC	220PF 10% 500V	C634	1-165-127-11	CERAMIC	470PF 10% 500V
C515	1-106-367-00	MYLAR	0.01MF 10% 100V	C635	1-126-967-11	ELECT	47MF 20% 16V
C517	1-162-116-00	CERAMIC	680PF 10% 2KV	C636	1-137-374-11	FILM	0.047MF 5% 50V
C518	1-162-116-00	CERAMIC	680PF 10% 2KV	C637	1-128-551-11	ELECT	22MF 20% 25V
C519	▲ 1-104-771-11	FILM	0.02MF 3% 2KV	C639	1-161-740-00	CERAMIC	470PF 10% 400V
C520	▲ 1-162-134-91	CERAMIC	470PF 10% 2KV	C641	1-126-933-11	ELECT	100MF 20% 10V
C521	▲ 1-136-316-51	FILM	0.056MF 5% 630V	C642	1-137-217-11	FILM	0.01MF 5% 0
C522	1-106-383-00	MYLAR	0.047MF 10% 200V	C643	1-137-218-11	FILM	0.012MF 5% 0
C523	1-102-002-00	CERAMIC	680PF 10% 500V	C645	1-102-125-00	CERAMIC	0.0047MF 10% 50V
C524	1-102-212-00	CERAMIC	820PF 10% 500V	C646	1-126-933-11	ELECT	100MF 20% 16V
C525	1-124-902-00	ELECT	0.47MF 20% 50V	C647	1-128-551-11	ELECT	22MF 20% 25V
C526	1-106-395-00	MYLAR	0.15MF 10% 200V	C684	1-124-667-11	ELECT	10MF 20% 50V
C527	1-109-956-11	ELECT	1MF 20% 200V	C695	1-126-964-11	ELECT	10MF 20% 50V
C528	1-136-113-00	FILM	2MF 5% 200V	C2205	1-124-925-11	ELECT	2.2MF 20% 50V
C529	1-106-343-00	MYLAR	0.001MF 10% 100V	C2208	1-124-925-11	ELECT	2.2MF 20% 50V
C530	1-104-770-11	FILM	0.62MF 5% 200V	C2210	1-104-666-11	ELECT	220MF 20% 25V
C531	1-104-664-11	ELECT	47MF 20% 25V	C2211	1-104-664-11	ELECT	47MF 20% 25V
C532	1-136-165-00	FILM	0.1MF 5% 50V	C2212	1-104-666-11	ELECT	220MF 20% 25V
C533	1-124-927-11	ELECT	4.7MF 20% 50V	C2213	1-136-173-00	FILM	0.47MF 5% 50V
C534	1-136-161-00	FILM	0.047MF 5% 50V	C2215	1-136-169-00	FILM	0.22MF 5% 50V
C535	1-126-969-11	ELECT	220MF 20% 50V	C2216	1-126-941-11	ELECT	470MF 20% 25V
C536	1-108-702-11	MYLAR	0.068MF 10% 100V	C2217	1-136-169-00	FILM	0.22MF 5% 50V
C537	1-126-964-11	ELECT	10MF 20% 50V	C2218	1-126-942-61	ELECT	1000MF 20% 25V
C538	1-136-161-00	FILM	0.047MF 5% 50V	C2219	1-126-942-61	ELECT	1000MF 20% 25V
C539	1-124-925-11	ELECT	2.2MF 20% 50V	C2220	1-124-925-11	ELECT	2.2MF 20% 50V
C540	1-137-366-11	FILM	0.0022MF 5% 50V	<CONNECTOR>			
C541	1-137-366-11	FILM	0.0022MF 5% 50V	CN104	1-573-979-21	CONNECTOR, BOARD TO BOARD	11P
C542	1-130-481-00	FILM	0.0068MF 5% 50V	CN105	* 1-508-768-00	PIN, CONNECTOR (5MM PITCH)	6P
C543	1-124-927-11	ELECT	4.7MF 20% 50V	CN107	* 1-580-798-11	CONNECTORPIN (DY)	6P
C544	1-164-079-11	CERAMIC	330PF 10% 50V	CN108	* 1-573-296-21	CONNECTOR, BOARD TO BOARD	10P
C545	1-162-815-11	CERAMIC	47PF 5% 500V	CN109	* 1-573-296-21	CONNECTOR, BOARD TO BOARD	10P
C546	▲ 1-162-116-91	CERAMIC	680PF 10% 2KV	CN113	* 1-508-765-00	PIN, CONNECTOR (5MM PITCH)	3P
C553	1-164-079-11	CERAMIC	330PF 10% 50V	CN114	* 1-580-843-11	PIN, CONNECTOR (POWER)	
C561	1-107-635-11	ELECT	4.7MF 20% 160V	CN115	1-573-298-21	CONNECTOR, BOARD TO BOARD	20P
C598	1-109-959-91	ELECT	3.3MF 20% 160V	CN116	* 1-691-915-11	CONNECTOR, BOARD TO BOARD	15P
C600	1-126-964-11	ELECT	10MF 20% 50V	CN117	1-573-978-21	CONNECTOR, BOARD TO BOARD	11P
C601	▲ 1-136-311-51	FILM	0.47MF 20% 125V	<DIODE>			
C602	▲ 1-136-311-51	FILM	0.47MF 20% 125V	D501	8-719-028-72	DIODE RGP02-17EL-6433	
C604	▲ 1-162-579-81	CERAMIC	0.0047MF 20% 400V	D502	8-719-979-85	DIODE EGP20G-PKG23	
C607	1-125-735-11	ELECT	470MF 20% 200V	D503	8-719-979-85	DIODE EGP20G-PKG23	
C608	1-125-735-11	ELECT	470MF 20% 200V	D504	▲ 8-719-302-44	DIODE EL1Z	
C609	1-137-378-11	FILM	0.22MF 5% 50V	D505	8-719-302-43	DIODE EL1Z	
C610	1-136-169-00	FILM	0.22MF 5% 50V				
C611	1-136-169-00	FILM	0.22MF 5% 50V				
C612	1-136-169-00	FILM	0.22MF 5% 50V				
C613	1-164-625-11	CERAMIC	680PF 10% 500V				

The components identified by shading and mark **A** are critical for safety
Replace only with part number specified

Les composants identifies par une trame et une marque A sont critiques pour la securite Ne les remplacer que par une piece portant le numero specifie.

D

D

The components identified by **█** in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

The components identified by shading and mark **A** are critical for safety. Replace only with part number specified.

REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
R509	1-249-389-11	CARBON	47 5% 1/4W F	R625	1-249-377-11	CARBON	047 5% 1/4W F
█ R511 A	1-249-389-11	CARBON	1/4W	R627	1-249-377-11	CARBON	047 5% 1/4W F
R512	1-249-389-11	CARBON	47 5% 1/4W F	R628	1-249-377-11	CARBON	047 5% 1/4W F
R513	1-216-385-11	METAL OXIDE	047 5% 3W F	R629	1-249-388-11	CARBON	39 5% 1/4W F
R514	1-249-429-11	CARBON	10K 5% 1/4W	R630	1-215-857-11	METAL OXIDE	10 5% 1W F
R516	1-249-401-11	CARBON	47 5% 1/4W	R632	1-249-417-11	CARBON	1K 5% 1/4W F
R517	1-215-892-11	METAL OXIDE	1K 5% 2W F	R633	1-249-405-11	CARBON	100 5% 1/4W F
R518	1-215-892-11	METAL OXIDE	1K 5% 2W F	R635	1-249-413-11	CARBON	470 5% 1/4W F
R519	1-249-426-11	CARBON	56K 5% 1/4W F	R636	1-249-383-11	CARBON	15 5% 1/4W F
R520	1-249-423-11	CARBON	33K 5% 1/4W	R637	1-249-421-11	CARBON	22K 5% 1/4W
R521	1-249-411-11	CARBON	330 5% 1/4W	R638	1-249-423-11	CARBON	33K 5% 1/4W
R522	1-215-886-11	METAL OXIDE	100 5% 2W F	R639	1-249-423-11	CARBON	33K 5% 1/4W
R523	1-215-862-11	METAL OXIDE	68 5% 1W F	R640 A	1-202-730-91	SOLID	8.2M 20% 1/2W
█ R524 A	CARBON		1/4W	R643	1-216-399-00	METAL OXIDE	68 5% 3W F
R526	1-247-887-00	CARBON	220K 5% 1/4W	R644 A	1-212-853-61	FUSIBLE	6.8 5% 1/4W F
R527	1-215-861-00	METAL OXIDE	47 5% 1W F	R645	1-249-377-11	CARBON	047 5% 1/4W F
R528	1-247-750-11	CARBON	680 5% 1/2W F	R646	1-249-429-11	CARBON	10K 5% 1/4W
R530	1-215-445-00	METAL	10K 1% 1/4W	R647	1-247-863-91	CARBON	22K 5% 1/4W
R531	1-247-903-00	CARBON	1M 5% 1/4W	R648	1-249-414-11	CARBON	560 5% 1/4W
R532	1-215-446-00	METAL	11K 1% 1/4W	R649	1-216-431-11	METAL OXIDE	560 5% 1W F
R534	1-249-385-11	CARBON	22 5% 1/4W F	R650	1-249-405-11	CARBON	100 5% 1/4W F
R535	1-216-453-00	METAL OXIDE	270 5% 2W F	R653	1-249-381-11	CARBON	1 5% 1/4W
R536	1-249-389-11	CARBON	47 5% 1/4W F	R654	1-216-385-11	METAL OXIDE	047 5% 3W F
R539	1-215-459-00	METAL	39K 1% 1/4W	R655	1-249-417-11	CARBON	1K 5% 1/4W F
R543	1-249-419-11	CARBON	15K 5% 1/4W	R656	1-249-381-11	CARBON	1 5% 1/4W
R546	1-249-431-11	CARBON	15K 5% 1/4W	R657	1-249-417-11	CARBON	1K 5% 1/4W
R547	1-247-883-00	CARBON	150K 5% 1/4W	R658	1-249-389-11	CARBON	47 5% 1/4W F
R554	1-216-371-00	METAL OXIDE	15 5% 2W F	R659	1-247-883-00	CARBON	150K 5% 1/4W
R556	1-249-411-11	CARBON	330 5% 1/4W	R660	1-247-863-91	CARBON	22K 5% 1/4W
R557	1-249-415-11	CARBON	680 5% 1/4W F	R661	1-249-406-11	CARBON	120 5% 1/4W
R561	1-249-429-11	CARBON	10K 5% 1/4W	R662	1-249-393-11	CARBON	10 5% 1/4W
R562	1-215-437-00	METAL	47K 1% 1/4W	R663	1-247-737-11	CARBON	68 5% 1/2W F
R563	1-249-429-11	CARBON	10K 5% 1/4W	R689	1-215-861-00	METAL OXIDE	47 5% 1W F (KV-32V16)
R564	1-247-863-91	CARBON	22K 5% 1/4W	R690	1-249-423-11	CARBON	33K 5% 1/4W
R566	1-249-435-11	CARBON	33K 5% 1/4W	R691	1-249-423-11	CARBON	33K 5% 1/4W
R580	1-249-411-11	CARBON	330 5% 1/4W	R693	1-216-371-00	METAL OXIDE	15 5% 2W F
R602 A	1-202-723-91	SOLID	2.2M 20% 1/2W	R699	1-216-492-11	METAL OXIDE	82K 5% 3W F
R603	1-249-419-11	CARBON	15K 5% 1/4W	R2209	1-249-427-11	CARBON	68K 5% 1/4W
R605	1-247-893-11	CARBON	390K 5% 1/4W	R2210	1-249-435-11	CARBON	33K 5% 1/4W
R606	1-247-893-11	CARBON	390K 5% 1/4W	R2211	1-249-427-11	CARBON	68K 5% 1/4W
R607 A	1-202-933-61	FUSIBLE	0.1 10% 1/2W F	R2212	1-249-435-11	CARBON	33K 5% 1/4W
R608	1-215-860-11	METAL OXIDE	33 5% 1W F	R2215	1-249-425-11	CARBON	47K 5% 1/4W
R609	1-216-349-00	METAL OXIDE	1 5% 1W F	R2216	1-249-437-11	CARBON	47K 5% 1/4W
R610	1-216-369-00	METAL OXIDE	1 5% 2W F	R2217	1-249-435-11	CARBON	33K 5% 1/4W
R611	1-216-492-11	METAL OXIDE	82K 5% 3W F	R2218	1-249-441-11	CARBON	100K 5% 1/4W
R613	1-215-883-11	METAL OXIDE	33 5% 2W F	R2219	1-249-413-11	CARBON	470 5% 1/4W
R614	1-215-883-11	METAL OXIDE	33 5% 2W F	R2220	1-249-430-11	CARBON	12K 5% 1/4W
R615	1-249-421-11	CARBON	22K 5% 1/4W	R2221	1-249-430-11	CARBON	12K 5% 1/4W
R616	1-249-417-11	CARBON	1K 5% 1/4W	R2222	1-249-398-11	CARBON	27 5% 1/4W
R617	1-249-377-11	CARBON	047 5% 1/4W F	R2223	1-249-418-11	CARBON	12K 5% 1/4W
R618	1-249-377-11	CARBON	047 5% 1/4W F	R2224	1-249-418-11	CARBON	12K 5% 1/4W
R619	1-249-377-11	CARBON	047 5% 1/4W F	R2225	1-249-398-11	CARBON	27 5% 1/4W
R621	1-249-377-11	CARBON	047 5% 1/4W F	R2226	1-249-385-11	CARBON	22 5% 1/4W F
R622	1-249-377-11	CARBON	047 5% 1/4W F	R2227	1-249-385-11	CARBON	22 5% 1/4W F
R623	1-249-377-11	CARBON	047 5% 1/4W F	R2228	1-249-421-11	CARBON	22K 5% 1/4W
R624	1-249-377-11	CARBON	047 5% 1/4W F	R2229	1-249-421-11	CARBON	22K 5% 1/4W

The components identified by shading and mark **A** are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié

D **H**

REF. NO	PART NO	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
		<RELAY>		D1004	1-810-039-31	LED UNIT	
RY601	A 1-515-516-00	RELAY				<IC>	
RY602	1-515-516-00	RELAY		IC1001	8-741-818-51	ELEMENT, RAY-CATCHER SBX1818-51	
		<SWITCH>				<JACK>	
S501	1-572-707-11	SWITCH, LEVER		J1001	1-695-585-11	JACK BLOCK, PIN (LTYPE) 3P	
S502	1-572-707-11	SWITCH, LEVER					
		<TRANSFORMER>					
T501	A 1-453-146-11	TRANSFORMER ASSY, FLYBACK (NX-2604A3)				<CHIP CONDUCTOR>	
T502	A 1-437-195-21	TRANSFORMER, HORIZONTAL DRIVE		JR1090	1-216-295-91	CONDUCTOR, CHIP	(2012)
T503	A 1-424-545-22	TRANSFORMER, FERRITE (PMT)		JR1092	1-216-295-91	CONDUCTOR, CHIP	(2012)
T601	A 1-423-593-11	TRANSFORMER, LINE FILTER (LFT)					
T602	A 1-424-220-21	TRANSFORMER, LINE FILTER					
T603	A 1-423-563-11	TRANSFORMER, CONVERTER DRIVE				<TRANSISTOR>	
T604	A 1-423-615-11	TRANSFORMER, CONVERTER (PDT)		Q1001	8-729-216-22	TRANSISTOR	2SA1162-G (KV-32V16)
T605	1-426-669-11	TRANSFORMER, CONVERTER (SBT)		Q1002	8-729-422-27	TRANSISTOR	2SD601A-Q (KV-32V16)
		<THERMISTOR>		Q1003	8-729-422-27	TRANSISTOR	2SD601A-Q (KV-32S12/32S16/32V16)
THP601	A 1-809-539-11	THERMISTOR, POSITIVE				<RESISTOR>	
		<VARISTOR>		R1001	1-247-804-11	CARBON	75 5% 1/4W
VDR601	1-807-288-11	VARISTOR		R1002	1-249-425-11	CARBON	47K 5% 1/4W
VDR602	1-810-053-11	VARISTOR		R1003	1-216-113-00	METAL GLAZE	470K 5% 1/10W
VDR603	1-810-053-11	VARISTOR		R1004	1-249-425-11	CARBON	47K 5% 1/4W
		*****		R1005	1-216-113-00	METAL GLAZE	470K 5% 1/10W
		* A-1372-020-A H BOARD, COMPLETE (KV-32TW67/32TW68)		R1007	1-216-073-00	METAL GLAZE	10K 5% 1/10W
		*****		R1008	1-216-025-91	METAL GLAZE	100 5% 1/10W
		* A-1371-994-A H BOARD, COMPLETE (KV-32S12/32S16)		R1009	1-216-065-00	METAL GLAZE	47K 5% 1/10W
		*****		R1010	1-216-055-00	METAL GLAZE	18K 5% 1/10W
		* A-1371-998-A H BOARD, COMPLETE (KV-32V16)		R1011	1-216-025-91	METAL GLAZE	100 5% 1/10W
		*****		R1012	1-216-049-91	METAL GLAZE	1K 5% 1/10W
				R1013	1-216-033-00	METAL GLAZE	220 5% 1/10W (KV-32TW67/32TW68)
				R1014	1-216-047-00	METAL GLAZE	820 5% 1/10W
				R1015	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R1016	1-216-033-00	METAL GLAZE	220 5% 1/10W (KV-32V16)
		<CAPACITOR>		R1017	1-216-105-91	METAL GLAZE	220K 5% 1/10W (KV-32V16)
C1001	1-124-248-00	ELECT	22MF 20% 25V	R1018	1-216-089-00	METAL GLAZE	47K 5% 1/10W (KV-32V16)
C1002	1-126-160-11	ELECT	1MF 20% 50V	R1019	1-216-025-91	METAL GLAZE	100 5% 1/10W (KV-32V16)
C1003	1-126-160-11	ELECT	1MF 20% 50V	R1021	1-216-045-00	METAL GLAZE	680 5% 1/10W (KV-32S12/32S16/32V16)
C1004	1-124-584-00	ELECT	100MF 20% 10V				
C1010	1-124-465-00	ELECT	0.47MF 20% 50V (KV-32V16)				
		<CONNECTOR>					
CN154	* 1-564-520-11	PLUG, CONNECTOR 5P		S1001	1-571-532-21	SWITCH, TACTIL	
CN155	1-564-524-11	PLUG, CONNECTOR 9P		S1002	1-571-532-21	SWITCH, TACTIL	
CN156	* 1-564-518-11	PLUG, CONNECTOR 3P (KV-32TW67/32TW68/32V16)		S1003	1-571-532-21	SWITCH, TACTIL	
		<DIODE>		S1004	1-571-532-21	SWITCH, TACTIL	
				S1005	1-571-532-21	SWITCH, TACTIL	
				S1006	1-571-532-21	SWITCH, TACTIL	
				S1007	A 1-571-532-21	SWITCH, TACTIL	

L Z

<u>REF. NO</u>	<u>PART NO</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF. NO</u>	<u>PART NO</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	
				D920	8-719-404-46	DIODE MA110		
<hr/>								
						<JACK>		
* A-1390-410-A	L BOARD, COMPLETE (KV-32V16)			J901	1-764-873-11	JACK		
				J902	1-764-874-11	JACK		
<hr/>								
						<CHIP CONDUCTOR>		
<CAPACITOR>								
C1902	1-164-004-11	CERAMICCHIP	0 1MF	10% 25V	JR901	1-216-295-91	CONDUCTOR, CHIP	(2012)
					JR902	1-216-295-91	CONDUCTOR, CHIP	(2012)
					JR903	1-216-295-91	CONDUCTOR, CHIP	(2012)
					JR907	1-216-295-91	CONDUCTOR, CHIP	(2012)
<CONNECTOR>								
CN1903	* 1-564-518-11	PLUG, CONNECTOR 3P				<TRANSISTOR>		
<C>								
IC1903	8-759-189-86	IC IS455J			Q901	8-729-422-27	TRANSISTOR	2SD601A-Q
					Q902	8-729-216-22	TRANSISTOR	2SA1162-G
					Q903	8-729-216-22	TRANSISTOR	2SA1162-G
					Q904	8-729-422-27	TRANSISTOR	2SD601A-Q
					Q905	8-729-422-27	TRANSISTOR	2SD601A-Q
<RESISTOR>								
R1901	1-216-133-00	METAL GLAZE	3 3M	5% 1/10W	Q906	8-729-422-27	TRANSISTOR	2SD601A-Q
R1902	1-216-025-91	METAL GLAZE	100	5% 1/10W	Q907	8-729-216-22	TRANSISTOR	2SA1162-G
					Q908	8-729-216-22	TRANSISTOR	2SA1162-G
					Q909	8-729-216-22	TRANSISTOR	2SA1162-G
					Q910	8-729-422-27	TRANSISTOR	2SD601A-QRS-TX
<hr/>								
					Q911	8-729-140-93	TRANSISTOR	2SB733-34
					Q912	8-729-216-22	TRANSISTOR	2SA1162-G
<hr/>								
* A-1390-411-A Z BOARD, COMPLETE (KV-32V16)								
<CAPACITOR>								
C901	1-124-903-11	ELECT	1MF	20% 50V	R901	1-249-405-11	CARBON	100 5% 1/4WF
C902	1-124-903-11	ELECT	1MF	20% 50V	R902	1-216-033-00	METAL GLAZE	220 5% 1/10W
C933	1-126-964-11	ELECT	10MF	20% 50V	R903	1-216-073-00	METAL GLAZE	10K 5% 1/10W
C934	1-126-964-11	ELECT	10MF	20% 50V	R904	1-216-105-91	METAL GLAZE	220K 5% 1/10W
					R905	1-216-105-91	METAL GLAZE	220K 5% 1/10W
<CONNECTOR>								
CN901	* 1-564-520-11	PLUG, CONNECTOR 5P			R906	1-216-089-00	METAL GLAZE	47K 5% 1/10W
CN905	1-564-517-11	PLUG, CONNECTOR 2P			R907	1-216-089-00	METAL GLAZE	47K 5% 1/10W
					R908	1-216-005-00	METAL GLAZE	15 5% 1/10W
					R909	1-216-065-00	METAL GLAZE	47K 5% 1/10W
					R910	1-216-097-00	METAL GLAZE	100K 5% 1/10W
<DIODE>								
D901	8-719-121-24	DIODE RD9 1ESL			R911	1-216-105-91	METAL GLAZE	220K 5% 1/10W
D902	8-719-404-46	DIODE MA110			R912	1-216-057-00	METAL GLAZE	2 2K 5% 1/10W
D903	8-719-404-46	DIODE MA110			R913	1-216-101-00	METAL GLAZE	150K 5% 1/10W
D904	8-719-109-93	DIODE RD6 2ESB2			R914	1-216-089-00	METAL GLAZE	47K 5% 1/10W
D905	8-719-109-66	DIODE RD3 3ESB2			R915	1-216-089-00	METAL GLAZE	47K 5% 1/10W
D906	8-719-121-24	DIODE RD9 1ESL			R916	1-216-065-00	METAL GLAZE	4 7K 5% 1/10W
D907	8-719-404-46	DIODE MA110			R917	1-216-097-00	METAL GLAZE	100K 5% 1/10W
D908	8-719-404-46	DIODE MA110			R918	1-216-105-91	METAL GLAZE	220K 5% 1/10W
D909	8-719-404-46	DIODE MA110			R919	1-216-057-00	METAL GLAZE	2 2K 5% 1/10W
D910	8-719-404-46	DIODE MA110			R921	1-216-089-00	METAL GLAZE	47K 5% 1/10W
D911	8-719-404-46	DIODE MA110			R922	1-216-073-00	METAL GLAZE	10K 5% 1/10W
D912	8-719-404-46	DIODE MA110			R923	1-216-065-00	METAL GLAZE	4 7K 5% 1/10W
					R924	1-216-073-00	METAL GLAZE	10K 5% 1/10W
					R925	1-216-041-00	METAL GLAZE	470 5% 1/10W
					R926	1-216-025-91	METAL GLAZE	100 5% 1/10W
					R927	1-216-097-00	METAL GLAZE	100K 5% 1/10W

REF. NO	PART NO.	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK
R928	1-216-097-00	METAL GLAZE	100K 5% 1/10W	CN146	1-573-300-21	CONNECTOR, BOARD TO BOARD 18P (KV-32V16/32TW67/32TW68)	
R929	1-249-405-11	CARBON	100 5% 1/4W F	CN147	1-750-395-11	SOCKET, CONNECTOR 32P	
R935	1-216-073-00	METAL GLAZE	10K 5% 1/10W	CN148	1-564-517-11	PLUG, CONNECTOR 2P	
R936	1-216-089-00	METAL GLAZE	47K 5% 1/10W	CN149	* 1-564-519-11	PLUG, CONNECTOR 4P (KV-32V16)	
<hr/>							
<DIODE>							
* A-1394-415-A UA BOARD, COMPLETE (KV-32TW67/32TW68)				D401	8-719-110-17	DIODE RD10ESB2	
*****				D402	8-719-110-17	DIODE RD10ESB2	
* A-1394-529-A UA BOARD, COMPLETE (KV-32V16)				D403	8-719-110-17	DIODE RD10ESB2	
*****				D404	8-719-110-17	DIODE RD10ESB2	
* A-1394-676-A UA BOARD, COMPLETE (KV-32S12)				D405	8-719-110-17	DIODE RD10ESB2	
<hr/>							
<CAPACITOR>							
C401	1-163-031-11	CERAMICCHIP	0.01MF 50V	D408	8-719-110-17	DIODE RD10ESB2	
C402	1-128-551-11	ELECT	22MF 20% 25V	D409	8-719-110-17	DIODE RD10ESB2 (KV-32S12/32V16)	
C405	1-128-551-11	ELECT	22MF 20% 25V	D410	8-719-110-17	DIODE RD10ESB2	
C406	1-124-903-11	ELECT	1MF 20% 50V	D411	8-719-110-17	DIODE RD10ESB2	
C407	1-124-903-11	ELECT	1MF 20% 50V	D429	8-719-110-17	DIODE RD10ESB2	
C408	1-128-551-11	ELECT	22MF 20% 25V	D430	8-719-110-17	DIODE RD10ESB2	
C409	1-124-903-11	ELECT	1MF 20% 50V	D431	8-719-110-17	DIODE RD10ESB2	
C410	1-124-903-11	ELECT	1MF 20% 50V	D436	8-719-110-17	DIODE RD10ESB2	
C412	1-128-551-11	ELECT	22MF 20% 25V	D437	8-719-110-17	DIODE RD10ESB2	
C413	1-126-964-11	ELECT	10MF 20% 50V	<IC>			
C414	1-109-889-11	ELECT	1MF 20% 50V	<JACK>			
C415	1-109-889-11	ELECT	1MF 20% 50V	J401	1-750-515-11	TERMINAL BLOCK,S 3P	
C416	1-126-964-11	ELECT	10MF 20% 50V	J402	1-750-517-11	JACK BLOCK, PIN 3P	
C417	1-124-902-00	ELECT	0.47MF 20% 50V	J404	1-750-516-11	JACK BLOCK, PIN 2P	
C418	1-124-902-00	ELECT	0.47MF 20% 50V	<CHIP CONDUCTOR>			
C420	1-163-031-11	CERAMICCHIP	0.01MF 50V	JR402	1-216-295-91	CONDUCTOR, CHIP	(2012)
C430	1-109-889-11	ELECT	1MF 20% 50V (KV-32V16)	JR405	1-216-295-91	CONDUCTOR, CHIP	(2012) (KV-32S12/32V16)
C431	1-109-889-11	ELECT	1MF 20% 50V (KV-32V16)	JR408	1-216-295-91	CONDUCTOR, CHIP	(2012)
C432	1-128-551-11	ELECT	22MF 20% 25V (KV-32V16)	JR410	1-216-295-91	CONDUCTOR, CHIP	(2012)
C433	1-104-663-11	ELECT	33MF 20% 25V	JR411	1-216-295-91	CONDUCTOR, CHIP	(2012)
C434	1-163-117-00	CERAMICCHIP	100PF 5% 50V	JR412	1-216-295-91	CONDUCTOR, CHIP	(2012)
C440	1-126-964-11	ELECT	10MF 20% 50V (KV-32TW67/32TW68)	JR415	1-216-295-91	CONDUCTOR, CHIP	(2012)
C441	1-126-967-11	ELECT	47MF 20% 16V	JR416	1-216-295-91	CONDUCTOR, CHIP	(2012)
C442	1-163-117-00	CERAMICCHIP	100PF 5% 50V (KV-32V16/32TW67/32TW68)	JR418	1-216-295-91	CONDUCTOR, CHIP	(2012)
C462	1-126-933-11	ELECT	100MF 20% 16V	JR419	1-216-295-91	CONDUCTOR, CHIP	(2012)
C470	1-126-967-11	ELECT	47MF 20% 16V	JR422	1-216-295-91	CONDUCTOR, CHIP	(2012)
C471	1-128-551-11	ELECT	22MF 20% 25V	JR428	1-216-295-91	CONDUCTOR, CHIP	(2012)
<hr/>							
<FILTER BLOCK>							
CM401	1-467-554-21	FILTER BLOCK, COMB	(KV-32S12/32V16)	JR429	1-216-295-91	CONDUCTOR, CHIP	(2012)
CM402	1-466-912-21	FILTER BLOCK, COMB	(KV-32TW67/32TW68)	JR430	1-216-295-91	CONDUCTOR, CHIP	(2012)
<hr/>							
<CONNECTOR>							
CN141	* 1-564-520-11	PLUG, CONNECTOR 5P		JR431	1-216-295-91	CONDUCTOR, CHIP	(2012)
CN142	1-564-517-11	PLUG, CONNECTOR 2P (KV-32S12/32V16)		JR434	1-216-295-91	CONDUCTOR, CHIP	(2012)
CN143	1-750-395-11	SOCKET, CONNECTOR 32P		JR498	1-216-295-91	CONDUCTOR, CHIP	(2012)
CN144	* 1-564-521-11	PLUG, CONNECTOR 6P (KV-32V16)		JR499	1-216-295-91	CONDUCTOR, CHIP	(2012)
				JR901	1-216-295-91	CONDUCTOR, CHIP	(2012)
							(KV-32TW67/32TW68)

UA (KV-32TW67/32TW68)
(KV-32S12/V16)

C

The components identified by shading and mark **A** are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque **A**
sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié

C **E**

REF. NO	PART NO.	DESCRIPTION	REMARK	REF. NO	PART NO	DESCRIPTION	REMARK				
D731	8-719-911-19	DIODE 1SS119-25		R752	1-215-924-00	METAL OXIDE	15K 5% 3W F				
D732	8-719-911-19	DIODE 1SS119-25		R754	1-249-425-11	CARBON	4.7K 5% 1/4W				
D751	8-719-911-19	DIODE 1SS119-25		R756	1-249-411-11	CARBON	330 5% 1/4W				
D752	8-719-911-19	DIODE 1SS119-25		R757	1-249-393-11	CARBON	10 5% 1/4W				
D770	8-719-911-19	DIODE 1SS119-25		R770	1-247-863-91	CARBON	22K 5% 1/4W				
D771	8-719-911-19	DIODE 1SS119-25		R771	1-249-409-11	CARBON	220 5% 1/4W F				
D772	8-719-911-19	DIODE 1SS119-25		R772	1-249-409-11	CARBON	220 5% 1/4W F				
D773	8-719-911-19	DIODE 1SS119-25		R773	1-249-409-11	CARBON	220 5% 1/4W F				
D777	8-719-109-72	DIODE RD3 9ESB2		R774	1-249-437-11	CARBON	47K 5% 1/4W				
D790	8-719-911-19	DIODE 1SS119-25		R775	1-249-417-11	CARBON	1K 5% 1/4W F				
D791	8-719-911-19	DIODE 1SS119-25		R776	1-249-409-11	CARBON	220 5% 1/4W F				
D792	8-719-911-19	DIODE 1SS119-25		R790	1-249-413-11	CARBON	470 5% 1/4W				
R791	1-249-412-11	CARBON		R791	1-249-412-11	CARBON	390 5% 1/4W				
<JACK>											
J701	A 1-540-071-11	SOCKET, PICTURE TUBE		<VARIABLE RESISTOR>							
L701	1-410-478-11	INDUCTOR	47UH	RV702	1-230-641-11	RES, ADJ, METAL GLAZE	2 2M				

<TRANSISTOR>								* A-1341-622-A E BOARD, COMPLETE			
Q711	8-729-326-11	TRANSISTOR	2SC2611	*****							
Q712	8-729-119-78	TRANSISTOR	2SC2785-HFE	1-508-765-00 PIN,CONNECTOR (5MM PITCH) 3P							
Q731	8-729-326-11	TRANSISTOR	2SC2611	4-382-854-11 SCREW (M3X10), P, SW (+)							
Q732	8-729-119-78	TRANSISTOR	2SC2785-HFE	*****							
Q751	8-729-326-11	TRANSISTOR	2SC2611	<CAPACITOR>							
Q752	8-729-119-78	TRANSISTOR	2SC2785-HFE	C1501	1-126-941-11	ELECT	470MF 20% 16V				
Q770	8-729-119-76	TRANSISTOR	2SA1175-HFE	C1502	1-137-372-11	FILM	0.022MF 5% 50V				
Q771	8-729-200-17	TRANSISTOR	2SA1091-O	C1503	1-102-234-00	CERAMIC	270PF 10% 500V				
Q772	8-729-200-17	TRANSISTOR	2SA1091-O	C1504	1-136-165-00	FILM	0.1MF 5% 50V				
Q773	8-729-200-17	TRANSISTOR	2SA1091-O	C1505	1-126-964-11	ELECT	10MF 20% 50V				
<RESISTOR>											
R700	1-247-739-11	CARBON	100 5% 1/2W	C1507	1-126-964-11	ELECT	10MF 20% 50V				
R701	1-244-941-00	CARBON	680K 5% 1/2W	C1509	1-136-165-00	FILM	0.1MF 5% 50V				
R702	1-249-496-11	CARBON	100K 5% 1/2W	C1510	1-137-370-11	FILM	0.01MF 5% 50V				
R703	1-249-496-11	CARBON	100K 5% 1/2W	C1516	1-136-165-00	FILM	0.1MF 5% 50V				
R704	1-216-398-11	METAL OXIDE	5.6 5% 3W F	C1519	1-136-104-00	FILM	0.16MF 5% 200V				
R705	1-216-398-11	METAL OXIDE	5.6 5% 3W F	C1522	1-126-942-61	ELECT	1000MF 20% 16V				
R710	1-247-758-11	CARBON	3.3K 5% 1/2W	C1523	1-136-177-00	FILM	1MF 5% 50V				
R711	1-247-807-31	CARBON	100 5% 1/4W	C1524	1-126-963-11	ELECT	4.7MF 20% 50V				
R712	1-215-924-00	METAL OXIDE	15K 5% 3W F	C1529	1-126-964-11	ELECT	10MF 20% 50V				
R714	1-249-425-11	CARBON	4.7K 5% 1/4W	C1530	1-126-964-11	ELECT	10MF 20% 50V				
R716	1-249-417-11	CARBON	1K 5% 1/4W	C1532	1-126-963-11	ELECT	4.7MF 20% 50V				
R717	1-249-393-11	CARBON	10 5% 1/4W	C1533	1-126-233-11	ELECT	22MF 20% 25V				
R718	1-249-413-11	CARBON	470 5% 1/4W	C1542	1-104-664-11	ELECT	47MF 20% 16V				
R730	1-247-758-11	CARBON	3.3K 5% 1/2W	C1550	1-136-756-11	FILM	0.24MF 5% 200V				
R731	1-247-807-31	CARBON	100 5% 1/4W	<CONNECTOR>							
R732	1-215-924-00	METAL OXIDE	15K 5% 3W F	CN122	1-573-299-21	CONNECTOR, BOARD TO BOARD	10P				
R734	1-249-425-11	CARBON	4.7K 5% 1/4W	CN123	1-573-299-21	CONNECTOR, BOARD TO BOARD	10P				
R736	1-249-411-11	CARBON	330 5% 1/4W	<DIODE>							
R737	1-249-393-11	CARBON	10 5% 1/4W	D1501	8-719-911-19	DIODE 1SS119-25					
R750	1-247-758-11	CARBON	3.3K 5% 1/2W								
R751	1-247-807-31	CARBON	100 5% 1/4W								

E | P

REF. NO	PART NO	DESCRIPTION			REMARK	REF. NO	PART NO	DESCRIPTION		REMARK	
C3223	1-164-336-11	CERAMIC CHIP	0.33MF		25V	C3282	1-164-346-11	CERAMIC CHIP	1MF	16V	
C3224	1-164-222-11	CERAMIC CHIP	0.22MF		25V						
C3225	1-164-222-11	CERAMIC CHIP	0.22MF		25V						
C3226	1-164-005-11	CERAMIC CHIP	0.47MF		25V					<CONNECTOR>	
C3227	1-164-346-11	CERAMIC CHIP	1MF		16V	CN150	1-573-297-21	CONNECTOR, BOARD TO BOARD 18P			
C3228	1-163-117-00	CERAMIC CHIP	100PF	5%	50V						
C3229	1-163-093-00	CERAMIC CHIP	10PF	5%	50V					<DIODE>	
C3230	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V						
C3231	1-163-125-00	CERAMIC CHIP	220PF	5%	50V						
C3232	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D3202	8-719-031-68	DIODE HVU359TRF			
C3233	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	D3203	8-719-404-46	DIODE MA110			
C3234	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	D3208	8-719-110-17	DIODE RD10ESB2			
C3235	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	D3209	8-719-110-17	DIODE RD10ESB2			
C3236	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V					<IC>	
C3237	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V						
C3238	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	IC3200	8-759-288-13	IC MSM51C262-ZS			
C3239	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	IC3201	8-759-093-29	IC MB86144BPF-G-BND			
C3240	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	IC3202	8-759-093-28	IC MB40176PF-G-BND-EF			
C3241	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	IC3203	8-759-093-28	IC MB40176PF-G-BND-EF			
C3242	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	IC3204	8-759-093-25	IC MB3512PFQ			
C3243	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	IC3205	8-759-243-19	IC TC7SU04F			
C3244	1-163-113-00	CERAMIC CHIP	68PF	5%	50V					<COIL>	
C3245	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V						
C3246	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V						
C3247	1-163-033-91	CERAMIC CHIP	0.022MF		50V	L3201	1-410-470-11	INDUCTOR 10UH			
C3248	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	L3202	1-408-424-00	INDUCTOR 180UH			
C3249	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	L3203	1-408-424-00	INDUCTOR 180UH			
C3250	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	L3204	1-410-476-11	INDUCTOR 33UH			
C3251	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	L3205	1-410-470-11	INDUCTOR 10UH			
C3252	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	L3206	1-410-387-11	INDUCTOR 33UH			
C3253	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	L3207	1-410-387-11	INDUCTOR 33UH			
C3254	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	L3208	1-410-387-11	INDUCTOR 33UH			
C3255	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	L3209	1-410-387-11	INDUCTOR 33UH			
C3256	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V					<TRANSISTOR>	
C3257	1-163-117-00	CERAMIC CHIP	100PF	5%	50V						
C3258	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	Q3201	8-729-424-02	TRANSISTOR	2SA1162-G		
C3259	1-163-111-00	CERAMIC CHIP	56PF	5%	50V	Q3202	8-729-424-02	TRANSISTOR	2SD601A-Q		
C3260	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	Q3203	8-729-424-02	TRANSISTOR	2SA1162-G		
C3261	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q3204	8-729-424-02	TRANSISTOR	2SA1162-G		
C3263	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q3206	8-729-424-02	TRANSISTOR	2SD601A-Q		
C3264	1-165-319-11	CERAMIC CHIP	0.1MF		50V						
C3265	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q3207	8-729-424-02	TRANSISTOR	2SA1162-G		
C3266	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q3208	8-729-424-02	TRANSISTOR	2SD601A-Q		
C3267	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q3209	8-729-424-02	TRANSISTOR	2SA1162-G		
C3268	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	Q3210	8-729-424-02	TRANSISTOR	2SA1162-G		
C3269	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V						
C3270	1-165-319-11	CERAMIC CHIP	0.1MF		50V						
C3271	1-165-319-11	CERAMIC CHIP	0.1MF		50V					<RESISTOR>	
C3272	1-165-319-11	CERAMIC CHIP	0.1MF		50V						
C3273	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	R3201	1-216-097-00	METAL GLAZE	100K	5%	1/10W
						R3202	1-216-073-00	METAL GLAZE	10K	5%	1/10W
C3274	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	R3203	1-216-025-91	METAL GLAZE	100	5%	1/10W
C3275	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	R3204	1-216-025-91	METAL GLAZE	100	5%	1/10W
C3276	1-163-111-00	CERAMIC CHIP	56PF	5%	50V	R3205	1-216-121-00	METAL GLAZE	1M	5%	1/10W
C3277	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	R3207	1-216-295-91	CONDUCTOR, CHIP		(2012)	
C3278	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	R3208	1-216-097-00	METAL GLAZE	100K	5%	1/10W
C3279	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	R3209	1-216-079-00	METAL GLAZE	18K	5%	1/10W
C3280	1-126-964-11	ELECT	10MF	20%	50V	R3210	1-216-089-00	METAL GLAZE	47K	5%	1/10W

P**UA (KV-32S16 (US))**

<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>		<u>REMARK</u>	<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>		<u>REMARK</u>	
R3211	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R3273	1-216-073-00	METAL GLAZE	10K	5% 1/10W
R3212	1-216-073-00	METAL GLAZE	10K	5%	1/10W	R3274	1-216-049-91	METAL GLAZE	1K	5% 1/10W
R3213	1-216-075-00	METAL GLAZE	12K	5%	1/10W	R3275	1-216-049-91	METAL GLAZE	1K	5% 1/10W
R3214	1-216-121-00	METAL GLAZE	1M	5%	1/10W	R3276	1-216-049-91	METAL GLAZE	1K	5% 1/10W
R3215	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W	R3277	1-216-298-00	METAL GLAZE	2 2	5% 1/10W
R3216	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W					<CRYSTAL>
R3217	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W	X3201	1-567-878-11	VIBRATOR, CRYSTAL		
R3218	1-216-049-91	METAL GLAZE	1K	5%	1/10W	X3202	1-567-878-11	VIBRATOR, CRYSTAL		
R3219	1-216-049-91	METAL GLAZE	1K	5%	1/10W					
R3220	1-216-049-91	METAL GLAZE	1K	5%	1/10W					
R3221	1-216-655-11	METAL CHIP	1 5K	0 50%	1/10W					
R3222	1-216-655-11	METAL CHIP	1 5K	0 50%	1/10W					*****
R3223	1-216-025-91	METAL GLAZE	100	5%	1/10W					
R3224	1-216-049-91	METAL GLAZE	1K	5%	1/10W					
R3225	1-216-025-91	METAL GLAZE	100	5%	1/10W					* A-1394-527-A UA BOARD, COMPLETE (KV-32S16 US MODEL)
R3226	1-216-085-00	METAL GLAZE	33K	5%	1/10W					*****
R3227	1-216-647-11	METAL CHIP	680	0 50%	1/10W					
R3228	1-216-045-00	METAL GLAZE	680	5%	1/10W					<CAPACITOR>
R3229	1-216-073-00	METAL GLAZE	10K	5%	1/10W					
R3230	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C401	1-163-031-11	CERAMIC CHIP	0 01MF	50V
R3231	1-216-001-00	METAL GLAZE	10	5%	1/10W	C402	1-128-551-11	ELECT	22MF	20% 25V
R3232	1-216-083-00	METAL GLAZE	27K	5%	1/10W	C405	1-128-551-11	ELECT	22MF	20% 25V
R3233	1-216-049-91	METAL GLAZE	1K	5%	1/10W	C406	1-124-903-11	ELECT	1MF	20% 50V
R3234	1-216-651-11	METAL CHIP	1K	0 50%	1/10W	C407	1-124-903-11	ELECT	1MF	20% 50V
R3235	1-216-043-91	METAL GLAZE	560	5%	1/10W	C408	1-128-551-11	ELECT	22MF	20% 25V
R3236	1-216-065-00	METAL GLAZE	4 7K	5%	1/10W	C409	1-124-903-11	ELECT	1MF	20% 50V
R3237	1-216-043-91	METAL GLAZE	560	5%	1/10W	C410	1-124-903-11	ELECT	1MF	20% 50V
R3238	1-216-049-91	METAL GLAZE	1K	5%	1/10W	C412	1-128-551-11	ELECT	22MF	20% 25V
R3239	1-216-043-91	METAL GLAZE	560	5%	1/10W	C413	1-126-964-11	ELECT	10MF	20% 50V
R3241	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W	C414	1-109-889-11	ELECT	1MF	20% 50V
R3242	1-216-049-91	METAL GLAZE	1K	5%	1/10W	C415	1-109-889-11	ELECT	1MF	20% 50V
R3243	1-216-025-91	METAL GLAZE	100	5%	1/10W	C416	1-126-964-11	ELECT	10MF	20% 50V
R3244	1-216-025-91	METAL GLAZE	100	5%	1/10W	C417	1-124-902-00	ELECT	0 47MF	20% 50V
R3245	1-216-025-91	METAL GLAZE	100	5%	1/10W	C418	1-124-902-00	ELECT	0 47MF	20% 50V
R3246	1-216-069-00	METAL GLAZE	6 8K	5%	1/10W	C420	1-163-031-11	CERAMIC CHIP	0 01MF	50V
R3247	1-216-063-00	METAL GLAZE	3 9K	5%	1/10W	C433	1-104-663-11	ELECT	33MF	20% 25V
R3248	1-216-295-91	CONDUCTOR, CHIP		(2012)		C434	1-163-117-00	CERAMIC CHIP	100PF	5% 50V
R3249	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W	C441	1-126-967-11	ELECT	47MF	20% 16V
R3250	1-216-043-91	METAL GLAZE	560	5%	1/10W	C442	1-163-117-00	CERAMIC CHIP	100PF	5% 50V
R3251	1-216-049-91	METAL GLAZE	1K	5%	1/10W	C462	1-126-933-11	ELECT	100MF	20% 16V
R3252	1-216-043-91	METAL GLAZE	560	5%	1/10W	C470	1-126-967-11	ELECT	47MF	20% 16V
R3253	1-216-065-00	METAL GLAZE	4 7K	5%	1/10W	C471	1-128-551-11	ELECT	22MF	20% 25V
R3254	1-216-043-91	METAL GLAZE	560	5%	1/10W					
R3255	1-216-041-00	METAL GLAZE	470	5%	1/10W					<FILTER BLOCK>
R3256	1-216-043-91	METAL GLAZE	560	5%	1/10W					
R3259	1-216-298-00	METAL GLAZE	2 2	5%	1/10W	CM401	1-467-554-21	FILTER BLOCK, COMB		
R3260	1-216-073-00	METAL GLAZE	10K	5%	1/10W					<CONNECTOR>
R3263	1-216-025-91	METAL GLAZE	100	5%	1/10W					
R3264	1-216-025-91	METAL GLAZE	100	5%	1/10W					
R3265	1-216-049-91	METAL GLAZE	1K	5%	1/10W	CN141	* 1-564-520-11	PLUG, CONNECTOR 5P		
R3266	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W	CN142	1-564-517-11	PLUG, CONNECTOR 2P		
R3267	1-216-055-00	METAL GLAZE	1 8K	5%	1/10W	CN143	1-750-395-11	SOCKET, CONNECTOR 32P		
R3268	1-216-053-00	METAL GLAZE	1 5K	5%	1/10W	CN146	1-573-300-21	CONNECTOR, BOARD TO BOARD 18P		
R3269	1-216-057-00	METAL GLAZE	2 2K	5%	1/10W	CN147	1-750-395-11	SOCKET, CONNECTOR 32P		
R3270	1-216-657-11	METAL CHIP	1 8K	0 50%	1/10W	CN148	1-564-517-11	PLUG, CONNECTOR 2P		
R3271	1-216-655-11	METAL CHIP	1 5K	0 50%	1/10W					

<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF. NO.</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
		<DIODE>		Q406	8-729-422-27	TRANSISTOR	2SB709A-Q
D401	8-719-110-17	DIODE RD10ESB2		Q410	8-729-422-27	TRANSISTOR	2SD601A-Q
D402	8-719-110-17	DIODE RD10ESB2		Q415	8-729-422-27	TRANSISTOR	2SD601A-Q
D403	8-719-110-17	DIODE RD10ESB2		Q416	8-729-422-27	TRANSISTOR	2SB709A-Q
D404	8-719-110-17	DIODE RD10ESB2		Q417	8-729-422-27	TRANSISTOR	2SB709A-Q
D405	8-719-110-17	DIODE RD10ESB2		Q418	8-729-422-27	TRANSISTOR	2SB709A-Q
D408	8-719-110-17	DIODE RD10ESB2				<RESISTOR>	
D409	8-719-110-17	DIODE RD10ESB2		R401	1-247-408-11	CARBON	75 5% 1/4W
D410	8-719-110-17	DIODE RD10ESB2		R402	1-216-113-11	METAL GLAZE	470K 5% 1/10W
D411	8-719-110-17	DIODE RD10ESB2		R403	1-216-113-00	METAL GLAZE	470K 5% 1/10W
D429	8-719-110-17	DIODE RD10ESB2		R404	1-247-408-11	CARBON	75 5% 1/4W
D430	8-719-110-17	DIODE RD10ESB2		R405	1-216-113-00	METAL GLAZE	470K 5% 1/10W
D431	8-719-110-17	DIODE RD10ESB2		R406	1-216-113-00	METAL GLAZE	470K 5% 1/10W
D436	8-719-110-17	DIODE RD10ESB2		R407	1-247-804-11	CARBON	75 5% 1/4W
D437	8-719-110-17	DIODE RD10ESB2		R408	1-216-113-11	METAL GLAZE	470K 5% 1/10W
		<IC>		R409	1-216-113-11	METAL GLAZE	470K 5% 1/10W
IC402	8-752-067-28	IC CXA1545AS		R410	1-249-425-11	CARBON	47K 5% 1/4W
		<JACK>		R411	1-249-425-11	CARBON	47K 5% 1/4W
J401	1-750-515-11	TERMINAL BLOCK, S 3P		R412	1-249-425-11	CARBON	47K 5% 1/4W
J402	1-750-517-11	JACK BLOCK, PIN 3P		R413	1-249-425-11	CARBON	47K 5% 1/4W
J404	1-750-516-11	JACK BLOCK, PIN 2P		R414	1-247-408-11	CARBON	75 5% 1/4W
		<CHIP CONDUCTOR>		R415	1-249-425-11	CARBON	47K 5% 1/4W
JR402	1-216-295-91	CONDUCTOR, CHIP	(2012)	R416	1-216-647-11	METAL CHIP	680 0.5% 1/10W
JR405	1-216-295-91	CONDUCTOR, CHIP	(2012)	R417	1-216-645-11	METAL CHIP	560 0.5% 1/10W
JR408	1-216-295-91	CONDUCTOR, CHIP	(2012)	R421	1-216-065-11	METAL GLAZE	47K 5% 1/10W
JR410	1-216-295-91	CONDUCTOR, CHIP	(2012)	R425	1-216-065-11	METAL GLAZE	47K 5% 1/10W
JR411	1-216-295-91	CONDUCTOR, CHIP	(2012)	R431	1-216-049-91	METAL GLAZE	1K 5% 1/10W
JR412	1-216-295-91	CONDUCTOR, CHIP	(2012)	R432	1-216-295-91	CONDUCTOR, CHIP	(2012)
JR415	1-216-295-91	CONDUCTOR, CHIP	(2012)	R434	1-216-049-91	METAL GLAZE	1K 5% 1/10W
JR416	1-216-295-91	CONDUCTOR, CHIP	(2012)	R435	1-216-295-91	CONDUCTOR, CHIP	(2012)
JR418	1-216-295-91	CONDUCTOR, CHIP	(2012)	R439	1-216-049-91	METAL GLAZE	1K 5% 1/10W
JR419	1-216-295-91	CONDUCTOR, CHIP	(2012)	R441	1-216-049-91	METAL GLAZE	1K 5% 1/10W
JR422	1-216-295-91	CONDUCTOR, CHIP	(2012)	R444	1-216-095-00	METAL GLAZE	82K 5% 1/10W
JR428	1-216-295-91	CONDUCTOR, CHIP	(2012)	R445	1-216-073-00	METAL GLAZE	10K 5% 1/10W
JR429	1-216-295-91	CONDUCTOR, CHIP	(2012)	R446	1-216-073-00	METAL GLAZE	10K 5% 1/10W
JR430	1-216-295-91	CONDUCTOR, CHIP	(2012)	R450	1-208-774-11	METAL CHIP	470 0.5% 1/10W
JR431	1-216-295-91	CONDUCTOR, CHIP	(2012)	R451	1-216-065-00	METAL GLAZE	47K 5% 1/10W
JR434	1-216-295-91	CONDUCTOR, CHIP	(2012)	R453	1-216-645-11	METAL CHIP	560 0.5% 1/10W
JR498	1-216-295-91	CONDUCTOR, CHIP	(2012)	R454	1-216-295-91	CONDUCTOR, CHIP	(2012)
JR499	1-216-295-91	CONDUCTOR, CHIP	(2012)	R456	1-216-041-11	METAL GLAZE	470 5% 1/10W
		<COIL>		R457	1-216-033-11	METAL GLAZE	220 5% 1/10W
L401	1-410-473-11	INDUCTOR 18UH		R458	1-216-033-11	METAL GLAZE	220 5% 1/10W
L403	1-410-476-11	INDUCTOR 33UH		R478	1-216-041-00	METAL GLAZE	470 5% 1/10W
L404	1-410-669-31	INDUCTOR 33UH		R482	1-249-417-11	CARBON	1K 5% 1/4W
		<TRANSISTOR>		R483	1-249-417-11	CARBON	1K 5% 1/4W
Q401	8-729-422-27	TRANSISTOR	2SD601A-Q	R490	1-216-295-91	CONDUCTOR, CHIP	(2012)
Q405	8-729-422-27	TRANSISTOR	2SB709A-Q	R491	1-216-295-91	CONDUCTOR, CHIP	(2012)
				R492	1-216-295-91	CONDUCTOR, CHIP	(2012)
				R493	1-216-081-00	METAL GLAZE	22K 5% 1/10W

UA (KV-32S16 (Canadian))

<u>REF. NO</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF. NO</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	
		* A-1394-544-A UA BOARD, COMPLETE (KV-32S16 Canadian MODEL)	*****	JR412	1-216-295-91	CONDUCTOR, CHIP	(2012)	
				JR415	1-216-295-91	CONDUCTOR, CHIP	(2012)	
				JR416	1-216-295-91	CONDUCTOR, CHIP	(2012)	
				JR418	1-216-295-91	CONDUCTOR, CHIP	(2012)	
		<CAPACITOR>		JR422	1-216-295-91	CONDUCTOR, CHIP	(2012)	
C401	1-163-031-11	CERAMICCHIP	0 01MF	50V	JR423	1-216-295-91	CONDUCTOR, CHIP	(2012)
C402	1-128-551-11	ELECT	22MF	20% 25V	JR424	1-216-295-91	CONDUCTOR, CHIP	(2012)
C405	1-128-551-11	ELECT	22MF	20% 25V	JR428	1-216-295-91	CONDUCTOR, CHIP	(2012)
C409	1-124-903-11	ELECT	1MF	20% 50V	JR429	1-216-295-91	CONDUCTOR, CHIP	(2012)
C410	1-124-903-11	ELECT	1MF	20% 50V	JR430	1-216-295-91	CONDUCTOR, CHIP	(2012)
C411	1-104-665-11	ELECT	100MF	20% 25V	JR431	1-216-295-91	CONDUCTOR, CHIP	(2012)
C412	1-128-551-11	ELECT	22MF	20% 25V	JR434	1-216-295-91	CONDUCTOR, CHIP	(2012)
C413	1-126-964-11	ELECT	10MF	20% 50V	JR435	1-216-295-91	CONDUCTOR, CHIP	(2012)
C414	1-109-889-11	ELECT	1MF	20% 50V	JR499	1-216-295-91	CONDUCTOR, CHIP	(2012)
C415	1-109-889-11	ELECT	1MF	20% 50V				
C416	1-126-964-11	ELECT	10MF	20% 50V				
C420	1-163-031-11	CERAMICCHIP	0 01MF	50V				
C441	1-126-967-11	ELECT	47MF	20% 16V				
C470	1-126-967-11	ELECT	47MF	20% 16V	Q401	8-729-422-27	TRANSISTOR	2SD601A-Q
C471	1-128-551-11	ELECT	22MF	20% 25V	Q405	8-729-216-22	TRANSISTOR	2SA1162-G
				Q406	8-729-216-22	TRANSISTOR	2SA1162-G	
		<FILTER BLOCK>						
CM401	1-467-554-21	FILTER BLOCK, COMB						
		<CONNECTOR>		R401	1-247-804-11	CARBON	75	
				R402	1-216-113-00	METAL GLAZE	470K	
				R403	1-216-113-00	METAL GLAZE	470K	
				R404	1-247-804-11	CARBON	75	
				R407	1-247-804-11	CARBON	75	
CN143	1-750-395-11	SOCKET, CONNECTOR 32P						
CN147	1-750-395-11	SOCKET, CONNECTOR 32P						
		<DIODE>		R412	1-249-425-11	CARBON	47K	
				R413	1-249-425-11	CARBON	47K	
				R415	1-249-425-11	CARBON	47K	
				R416	1-216-647-11	METAL CHIP	680	
				R417	1-216-645-11	METAL CHIP	560	
D401	8-719-110-17	DIODE RD10ESB2						
D402	8-719-110-17	DIODE RD10ESB2		R418	1-216-025-91	METAL GLAZE	100	
D408	8-719-110-17	DIODE RD10ESB2		R421	1-216-065-00	METAL GLAZE	47K	
D409	8-719-110-17	DIODE RD10ESB2		R425	1-216-065-00	METAL GLAZE	47K	
D410	8-719-110-17	DIODE RD10ESB2		R431	1-216-045-00	METAL GLAZE	680	
				R432	1-216-045-00	METAL GLAZE	680	
D411	8-719-110-17	DIODE RD10ESB2						
		<IC>		R434	1-216-045-00	METAL GLAZE	680	
				R435	1-216-045-00	METAL GLAZE	680	
				R439	1-216-049-91	METAL GLAZE	1K	
				R440	1-216-025-91	METAL GLAZE	100	
				R441	1-216-049-91	METAL GLAZE	1K	
IC401	8-759-634-69	IC M52470P						
IC403	8-759-711-32	IC NJM2245M						
IC404	8-759-164-18	IC MM1118XFF						
		<JACK>		R442	1-216-025-91	METAL GLAZE	100	
				R443	1-216-025-91	METAL GLAZE	100	
				R444	1-216-095-00	METAL GLAZE	82K	
				R450	1-216-627-11	METAL CHIP	100	
				R453	1-208-784-11	METAL CHIP	12K	
J401	1-750-515-11	TERMINAL BLOCK,S 3P						
		<CHIP CONDUCTOR>		R454	1-216-025-91	METAL GLAZE	100	
JR402	1-216-295-91	CONDUCTOR, CHIP						
JR405	1-216-295-91	CONDUCTOR, CHIP						
JR408	1-216-295-91	CONDUCTOR, CHIP						
JR409	1-216-295-91	CONDUCTOR, CHIP						
JR410	1-216-295-91	CONDUCTOR, CHIP						
JR411	1-216-295-91	CONDUCTOR, CHIP						

The components identified by shading and mark are critical for safety
Replace only with part number specified

Les composants identifiés par une trame et une marque sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié

<u>REF. NO</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>REMARK</u>	<u>REF. NO</u>	<u>PART NO</u>	<u>DESCRIPTION</u>	<u>REMARK</u>
		MISCELLANEOUS	*****				
	1-402-952-11	COIL, DEMAGNETIZATION					
	1-417-178-11	SELECTOR, ANTENNA (AS-2) (KV-32V16)			* 4-041-259-01	BAG, PROTECTION	
	1-504-524-11	SPEAKER (8CM) (KV-32V16)			* 4-041-362-01	HINGE SET (KV-32TW67/32TW68)	
	1-504-531-11	SPEAKER (13 1X6 2CM) (KV-32S12/32S16)			4-043-736-01	FILTER, MOUSE (KV-32V16)	
	1-544-549-11	SPEAKER (KV-32TW67/32TW68)			4-043-737-01	HOLDER, FILTER (KV-32V16)	
	1-751-059-11	CORD, POWER (WITH CONNECTOR) 10A/125V					
	* 1-751-135-11	CABLE, PIN (KV-32V16)					
	* 1-751-136-11	CABLE, PIN (KV-32V16)					
	1-766-374-11	PLUG, F-PIN (KV-32S12/32S16/32TW67/32TW68)					
	8-451-315-41	DEFLECTION YOKE Y34FXA (VTM)					
V901		8-733-739-05	PICTURE TUBE (A80JY151X)				
		ACCESSORIES AND MATERIALS	*****				
	X-4031-138-1	DOOR ASSY, GLASS (KV-32TW67/32TW68)					
	1-769-181-11	MOUSE, INTERIJENT CABLE (KV-32V16)					
	2-352-981-01	SPACER (KV-32WT67/32TW68)					
	2-359-505-01	RETAINER, MAGNET (KV-32TW67/32YW68)					
	* 3-704-356-01	SHEET (STANDARD), PROTECTION (KV-32TW67/32TW68)					
	3-756-618-21	MANUAL, INSTRUCTION (ENGLISH) (KV-32TW67 /32TW68)					
	3-756-618-41	MANUAL, INSTRUCTION (SPANISH) (KV-32TW67 /32TW68)					
	3-758-286-21	MANUAL, INSTRUCTION (ENGLISH) (KV-32S16 (Canadian))					
	3-758-286-31	MANUAL, INSTRUCTION (FRENCH) (KV-32S16 (Canadian))					
	3-758-289-21	MANUAL, INSTRUCTION (ENGLISH) (KV-32S12/32S16 (US)/32V16)					
	3-758-289-31	MANUAL, INSTRUCTION (FRENCH) (KV-32S12 (Canadian) /32V16 (Canadian))					
	3-758-289-41	MANUAL, INSTRUCTION (SPANISH) (KV-32S12 (US) /32S16 (US) /32V16 (US))					
	3-758-287-21	MANUAL, INSTRUCTION, CABLE MOUSE (KV-32V16 (US))					
	3-758-287-31	MANUAL, INSTRUCTION, CABLE MOUSE (KV-32V16 (Canadian))					
	3-758-287-41	MANUAL, INSTRUCTION, CABLE MOUSE (KV-32V16 (US))					
	* 4-030-895-01	JOINT (KV32TW67/32TW68)					
	* 4-040-144-01	CUSHION (LOWER) (ASSY) (KV-32S12/32S16)					
	* 4-040-413-01	CUSHION (LOWER) (ASSY) (KV-32TW67/32TW68)					
	* 4-043-598-01	CUSHION (LOWER) (ASSY) (KV-32V16)					
	* 4-040-146-01	INDIVIDUAL CARTON (KV-32S12/32S16)					
	* 4-040-420-02	INDIVIDUAL CARTON (KV-32TW67/32TW68)					
	* 4-043-599-01	INDIVIDUAL CARTON (KV-32V16)					
	* 4-040-412-01	CUSHION (UPPER) (ASSY) (KV-32TW67/32TW68)					
	* 4-043-597-01	CUSHION (UPPER) (ASSY) (KV-32V16)					
	* 4-044-388-01	CUSHION (UPPER) (ASSY) (KV-32S12/32S16)					
	* 4-040-414-01	Sheet, CORRUGATED FIBERBOARD (KV-32TW67/32TW68)					
	* 4-040-416-01	TRAY (KV-32TW/32TW68)					
	4-041-162-01	PIN, RACK (KV-32TW67/32TW68)					